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LEPROSY—THE JAPANESE THERAPEUTIC EXPERIMENT AT MOLOKAI.

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Having made, during the last twenty-five years a special study of leprosy, and written much upon the subject, I have been greatly interested in all the therapeutic measures which have been brought to the attention of the medical profession in different parts of the world, where this dread disease holds sway, and more particularly, at the Hawaiian leper settlement of Molokai, with which my interest has been identified for twenty years.

In consequence of this interest, I have watched the therapeutic experiments of Dr. Goto, a Japanese native physician, who, for a considerable period, has been a salaried attendant at the leper settlement of Molokai, Republic of Hawaii, where he has been permitted to apply his vaunted *cure*, and, as a part of the history of therapeusis in this incurable disease, I feel it to be eminently proper to present the results of his work, as based on the reports to the Hawaiian Board of Health, and their discussion by Hawaiian physicians since the spring of 1894, after a year of the Goto treatment.

Dr. Goto is the son of an aged Japanese physician, educated only in the ancient system of medicine, which is now strictly forbidden; ''Western medicine,'' as it is called, being the only legal form of practice, and its teaching is pursued to the highest attainable perfection throughout the Mikado's empire.

The lepers of Molokai are always expecting the arrival of an inspired medical *savior*, bearing the *panacea* which, at last, is to cleanse them of their disease, heal their frightful sores, correct their deformity, and restore them again to the world and their civil rights. It would fill a large volume to even briefly refer to the many therapeutic experiments during the period of the existence of the leper settlement at Molokai, all being much vaunted methods of eminent men, in other portions of the world, all ending in failure here, as elsewhere. Every new suggestion is hailed with enthusiasm, the lepers become clamorous for the government to appropriate means for its thorough trial, and, in almost every instance, the response has been prompt in acquiescence, in accordance with its constant beneficent action towards these outcasts.

In the case of Dr. Goto, it responded by his appointment at a salary of $250 per month, the expenditure of a large amount of money for his drugs and preparations for the application of his treatment. This consisted entirely of medicated baths, and one internal medicine. Large tanks, or bathtubs, were prepared, capable of accommodating ten patients at once, and in these they were treated to a warm infusion of herbs, the period of immersion being about an hour. These herbs, or herb, were imported from Japan in huge bales, and by the ton. Those under treatment also received a course of medicine in the form of small pills, which were given by the teaspoonful, and the treatment was invariably the same in every case. Dr. Goto refuses to give any information in regard to his drugs, and declines to meet any physician in discussion concerning his mode of treatment; but desires that he shall be made the sole physician of the leper settlement at an increased salary.

Although a vast number of the lepers have petitioned the Board of Health to grant Dr. Goto's request, and express the belief that his treatment is of the greatest benefit, and likely to be curative, the evidence before the Board does not sustain the Japanese physician's claim, or the opinion of his partisans: yet the Board is disinclined to discharge him, while the element of faith, possibly, is working so powerfully for the benefit of the lepers, if not their cure.

The evidence seems to show that of 200 lepers examined by the Board, then placed under Dr. Goto's care, and reëxamined at the end of nine months, no cure was to be acknowledged, and such improvement as was exhibited would have followed ordinary or sulphur bathing, with tonics, special dieting, and careful attention to hygiene. Such improvement had also followed other methods of special treatment with these associations, and particularly a recent method with a peculiar form of tar from Wisconsin. Some of Dr. Goto's patients were undoubtedly worse than when they commenced his treatment.

It was proposed that Dr. Goto be allowed to pursue his method, and, at the same time, the regular physician to the settlement be permitted to institute a course of hot baths without herbal medication, but strict attention to be paid to hygiene and diet, and that a comparative result be reported, which would determine whether the Japanese treatment was possessed of any peculiar merits. The unanimous verdict of the members of the Board, most of them of large experience in leprosy, was that Dr. Goto was an exponent of the grossest quackery.

We seem to be as far as ever from any method of cure of Asiatic leprosy, although it has been studied most carefully, earnestly and intelligently in every part of the world where it has existence, for the past forty years, under the light of modern medicine and methods of research. We have found the bacillus lepræ, and we have had a British Leprosy Commission for the purpose of fixing our knowledge of the leper up to date, but it only served to confuse matters, and make manifest our ignorance.

At this date, we have to acknowledge that there is no cure for leprosy, no medicine that specifically can help the leper; but, as we have known for centuries, hygiene, good food, cleanliness, avoidance of climatic exposure, and all shocks, with immediate attention to all inter-current conditions, may keep the disease in abeyance, even to a period of advanced life.

THE ROTCH FORMULA FOR INFANT FEEDING.

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Read before the San Francisco Medico-Chirurgical Society.

The infant deprived of its mother's milk, through accident or intent, has always been a source of trouble and anxiety to the physician and to all who have the responsibility for its care. How to replace the maternal nourishment, so as to give the best chance for life, has proved a most serious problem; and the long list of mixtures and of patent foods at various times recommended, is but evidence of the failure of any one of these to perfectly meet the requirements. One great difficulty, up to this time, in the way of solving the question, has been the readiness with which mothers, and to a certain extent, physicians, have taken up this or that infant food through empiricism. Because it has agreed in one or several cases, they continue to recommend it in all, entirely regardless of its composition and of its fitness for the individual child. Within the last few years, the subject of infant feeding has been investigated in a scientific way, and the effort has been made to determine, on rational lines, just what the composition of the food should be. Starting with mother's milk as a standard, which it is reasonable to assume is the nourishment most fit, as it is the most natural for the first months of life, numerous analyses have been made to determine the average proportion of its various ingredients, and then to put together a mixture that shall contain the same ingredients in the same average proportions. The Rotch formula is devised on this plan, and is a scientific effort to supply to the infant a fluid as nearly as possible like that secreted by the human mammary gland. It takes its name from its originator, Thomas Rotch, Professor of Pediatrics at Harvard Medical School.

Albert R. Leeds, Professor of Chemistry at the Stevens Institute of Technology, Hoboken, New Jersey, has recently published a series of analyses of human milk, 80 in number, from 68 different women, of varying nationalities, age, stage of lactation, and physical constitution. He found the average proportion of solid ingredients as follows: Lactose (milk-sugar), 7 per cent.; fat, 4.13 per cent.; albuminoids, 2 per cent., and ash, .2 per cent. These figures vary slightly from those of previous investigators, but are essentially the same as theirs; so that these proportions may be taken as the ones most desirable, because most apt to satisfy the infant's needs. A point of the utmost importance, brought out by Leeds' analyses, is that "there is no progressive change in the composition of human milk during lactation, but after the function has been normally established, the milk remains substantially the same during the entire period." The quantity of the secretion increases day by day, but the quality does not alter, as is commonly supposed. This means that when once an artificial food has been found, corresponding in its analysis with that of mother's milk, it is not necessary to keep changing its composition as the infant advances in age, but simply to give more of it, to comply with the increasing capacity of the stomach.

It is also shown by Leeds' analyses, that the proportions in the same woman's milk from day to day are not inalterably fixed, even though no evidence of this is given by the infant's condition. The most variable constituent is found to be the fat, and the next most variable, the albuminoids; while the amount of milk-sugar and of the inorganic ingredients, as shown by the ash, have a much narrower range. From this is deduced the practical conclusion that absolute accuracy in the preparation of an artificial food is not a vital matter, provided the proportions in the main are right; and that slight variations in the amount of the ingredients, such as are certain to occur in household mixtures, without instruments of precision at hand for measuring, are not fatal to the health of the infant.

For various reasons, cow's milk has long been chosen as the best basis for a substitute for human milk. In composition it approaches nearer to the latter than any other material obtainable, except asses' milk; while it is more plentiful than this and more easily procured. But when examined critically with reference to its ingredients, it is found, after all, to vary quite widely from the standard set by human milk. Analyses show its average composition to be as follows: Lactose, 4.42 per cent.; fats, 3.75 per cent.; albuminoids, 3.75 per cent.; ash, .68 per cent. These differences are marked enough to require considerable modification of the milk of the cow, before it can be substituted for that of woman.

Considering separately the different ingredients, the quantity of fat is nearly the same in each, and its quality is not perceptibly different in the two fluids. The milk sugar is identical in quality in each, but the amount in human milk is considerably larger; and this difference is of great significance. The function of this, the carbohydrate element of milk, is to furnish heat to the organism by oxidation. This heat producing property is especially needed in the food of young infants, whose normal temperature is higher than that of the adult, while their feeble muscular movements, and absence of locomotion have little effect in producing heat. Hence, the lactose in human milk makes up over half of the solid material, and is, relatively, the largest constituent, and its comparative deficiency in cow's milk is a serious lack. As regards the ash, which represents the inorganic matter of milk, its amount is more than three times greater in cow's than in human milk; although the different salts making up these proportions are the same in quality in each—potash, soda, lime, magnesia, oxide of iron, phosphoric acid, sulphuric acid and chlorine.

All of the foregoing differences between cow's and human milk can easily be made right, because they are merely quantitative differences; the addition of fats and lactose will repair the lack in cow's milk, while dilution will decrease the proportion of inorganic matter. But the great stumbling block in the way of making the two secretions similar, is the difference in the albuminoids, for this is a difference both of quantity and of quality. First, the albuminoids, as a whole, are nearly twice the amount in cow's milk that they are in human. In both they consist of casein and lactalbumin. Casein is an acid body, existing in each secretion as the caseinate of potash; but on adding to each a dilute acid, the behavior is decidedly different—in cow's milk the casein is precipitated readily, and in coarse coagula, while in human milk more acid is required to cause precipitation, and the casein separates, not in lumps, but in fine powder. The other albuminoid ingredient, lactalbumin, remains in solution after precipitation of the casein; but while in cow's milk the casein, coagulable by acid, is about four times the amount of the lactalbumin, in human milk the non-coagulable lactalbumin is twice as much as the casein. Taking equal weights of each milk, the coagulum of woman's milk is only one-fifth that of cow's; and besides being so much smaller in amount, it is less compact in consistence, and more soluble. This explains the difficulty that so often attends the digestion of cow's milk by the infant; and this is the one great obstacle in the way of making from cow's milk an artificial food that shall come up to the ideal furnished by the human mammary gland.

No way to perfectly overcome this difference in quality of the albuminoids has ever yet been found; but the problem of making a food whose quantitative analysis shall correspond with that of mother's milk has been worked out, and with this we have to be content. The Rotch formula comes as near solving the difficulty, as is possible in the nature of things. It is easy to see that the albuminoids can be decreased to the proper amount by diluting cow's milk with water; but by this process the lactose and fat, already too small in amount, are likewise proportionally decreased. Rotch, therefore, reinforces the milk with fat, by adding cream, before he dilutes with water; and in order to bring up the lactose to the proper proportion, he dilutes his mixture, not with plain water, but with a solution of lactose in water. The proper amounts of each ingredient were found only by experiment, making analyses of different mixtures, controlled by the average analysis of human milk, until at last one was obtained that corresponded with the standard. This mixture, known as the Rotch formula, is as follows: Cream, 3 ounces; milk, 2 ounces; water, 10 ounces; lime water, 1 ounce; milk sugar, 6$\frac{6}{8}$ drachms. The lime water is added to make the mixture slightly alkaline, in accord with the reaction of human milk.

Originally, Rotch directed that the cream, milk, milk sugar, and water should be mixed, and this mixture sterilized for 20 minutes before addition of the lime water. But time has proved that the process of sterilization is not such an ideal one as was formerly claimed. It came into use following the discovery that cow's milk frequently contains pathogenic germs, and from the desire to destroy these before the milk entered the infant's stomach. It was recommended, therefore, that the mixture be subjected for at least 20 minutes to a temperature above the boiling point of water, by placing the bottles containing the food in a closed receptacle, which is then charged with steam. This process undoubtedly killed the germs, but it was gradually discovered that it also effected important changes in the composition of the milk, which rendered it less nutritious. These changes, it has been found, concern the lactalbumin, which is coagulated by the degree of heat used, becoming thus less soluble and digestible; the casein is so altered that it is less readily and fully precipitated in the stomach, and the fat coalesces in drops and must be restored to an emulsion by the digestive function before it can be absorbed. The result of these alterations produced by sterilization is innutrition of the infant fed upon such food.

Within the last three or four years, a number of cases have been reported, by various observers, of scurvy in infants, with symptoms similar to those in adults deprived of fresh food. In an article on "Rachitis," read before the American Orthopedic Association in May, 1894, Benjamin Lee, of Philadelphia, says: "In conclusion, I would call attention to the fact which I think I have observed, that rickets and its congener, scurvy in infancy, have within the past few years been decidedly on the increase. In point of fact, if one looks over the text-books on the diseases of children written 40 or 50 years ago, he will fail to find the slightest allusion to the last-named disease. * * * Indeed, we need hardly go back more than ten years to find medical literature barren of allusions to this subject. To what are we to attribute this somewhat sudden increase in diseases of defective nutrition? Is it simply a coincidence that this condition has developed simultaneously with and *pari passu* with the introduction of the practice of the sterilization of milk? One curious feature of this increased development of these affections is that we meet it, not among the poor, not among those whose hygienic environment is faulty, and whose food supply is insufficient or of inferior quality, but among the children of the wealthy, who live under the most favorable conditions, with strictest attention to hygienic precautions and an abundant supply of the richest milk."

In consequence of these facts, there has been very recently a retreat from the advanced ground of sterilization, and the cry now is for "Pasteurization" instead. By this process, the cow's milk mixture is subjected to steam as before, but not in a closed receptacle under pressure, not at so high a temperature, and not for so long a time as was demanded by sterilization. In Pasteurization the milk is not allowed to reach a temperature above 160°–170° F., and this is kept up for 5 to 10 minutes at most. It is found that this is sufficient to destroy the germs of tuberculosis, typhoid, scarlet fever, pneumonia, and almost all other developed germs, though it does not kill all spores; and at the same time it does not change the quality of the milk. Hence, Pasteurization is the process at present recommended in preparing the Rotch formula for use. Practically this formula has proved exceedingly satisfactory; infants thrive well on it, not only retaining it without difficulty, as can be equally claimed for some other foods, but gaining steadily in weight and vitality under its use. Rigid adherence to the proportions given is not advised in all cases, and modification of the formula as stated is often required for an individual infant, in accordance with its special demands. For instance, if the albuminoids are not being fully digested, as shown by the occurrence of curds in the stools, it is advisable to slightly decrease the proportion of milk in the mixture; or, if constipation is habitually present, the lime water must be diminished, or the amount of cream increased, for excess of fat acts as a laxative.

It must be admitted that there are some infants with feeble digestion who seem unable to dispose of cow's milk at all, because of its coarse, insoluble curd; and for such the Rotch formula cannot be used. But for the majority of infants deprived of the breast, this mixture will be found the best substitute for the mother's milk; and in prescribing it, the physician can feel that he is not introducing any substance foreign to the infant's natural nourishment, but is approaching as near to that nourishment as science has so far been able to come. Certainly this cannot be said of any of the commercial foods advertised so extensively as "the best substitute for mother's milk;" for these are either greatly deficient in some one or several of the proper ingredients, or else they contain materials entirely foreign to the standard set by human milk. The Rotch formula is right in its proportions, and it contains no foreign elements; its shortcomings are those of cow's milk, upon which it is based, and for these no adequate remedy has yet been devised.

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THERAPEUTICS A SCIENCE OF PRECISION.

By E. J. BOYES, M.D., Oakland, Cal.

Specific diagnosis takes precedence of specific therapeusis. Hence has arisen the tendency of men of genius to strain after new knowledge of pathology and physiology, and the resulting progress is a matter of pride and gratulation to all. It is good, but it is not enough. The task of the diagnostician is, to-day, comparatively well defined and easy. With modern means of investigation and modern knowledge of conditions, he can examine the patient with scientific accuracy, and will announce the result with decision and pardonable pride. It is a remarkable fact that, though he has been all eagerness to find out what is the matter, he is apt to be somewhat indifferent as to what is to be done, and how.

This is precisely what is wrong with our therapeutics, and is just why medicine is still in a vague and chaotic condition. Moreover, it rests with the active practitioner to redeem the profession from this reproach by testing active principles and recording results. When they will do this as a class we shall see a system of practical therapeutics that every one desires, and then will certainty take the place of experiment.

At the present time there are many drugs, too valuable to be discarded, that have not been presented in alkaloidal form, but that does not alter the importance of the fact that a large number of our best drugs have been reduced to active principles. It is of these I purpose repeating a few facts, and recording my own experience of their precision as remedial agents in every-day business. Since my remarks cannot in this connection be exhaustive, they will be of the nature of practical suggestions, from the standpoint of drug exhibition.

Let us, for illustration, consider the possibilities of *atropine*. This drug is in itself a host. The best form is the sulphate, because it is more soluble; and this should be in tablets or granules of $\frac{1}{250}$ gr. and $\frac{1}{500}$ gr. If we bear in mind its physiological action; its power to check secretions; to relax muscular spasm, voluntary and involuntary; to stimulate the action of heart and lungs; to primarily contract and secondarily relax the arterioles and so flush the skin; and to increase the temperature of the body, it will be found to have many applications.

In *excessive perspiration*, whether in phthisis or incidental to other disease, it has no peer. The best results are obtained from a single large dose at bedtime, say from two to four granules or tablets of $\frac{1}{250}$ gr. each. In *local sweating* two grains to one ounce of water is an excellent application.

For *coryza* $\frac{1}{250}$ gr. given every half hour till the mouth is dry, and then every two hours for a day or two, usually aborts what would otherwise prove an annoying cold. To this should be added aconitine $\frac{1}{500}$ gr. if feverish; and calomel $\frac{1}{12}$ gr. if its influence is desirable, as it usually is.

As a combination for this condition there is nothing so good as the alkaloidal granule, of which the following is the formula: Atropine sulph., gr. $\frac{1}{1500}$; aconitine, gr. $\frac{1}{500}$; morphine sulph., gr. $\frac{1}{100}$; calomel, gr. $\frac{1}{12}$. Sig.—One or two every half hour till the mouth is dry, then every two hours for a couple of days.

Salivation, from any cause, is rapidly checked by $\frac{1}{250}$ gr. given half hourly. In *asthma*, atropine hypodermically, or by the mouth, often relieves promptly, and combined with strychnine is to-day the drug *par excellence* in the relief and cure of that disease. For obvious reasons it should not be used if bronchial secretion is tough and scanty.

In *whooping cough* it is of real value, and is to be infinitely preferred to belladonna. It should be given up to full physiological effect in two doses daily, rising gradually in dose till dryness of the mouth, dilatation of the pupil, etc., supervene, when the paroxysms will rapidly decrease in number and violence.

In *collapse*, with failing pulse and respiration, reduced temperature, and clammy perspiration, there is no measure that is equal to a hypodermic of atropine. In the *rigid os* of tardy labor it acts like magic. In *colic*, whether intestinal, hepatic, or renal, it is indicated and does good work. In *tenesmus* of bladder or rectum it is one of our best weapons. In *incontinence* of urine it has no peer. Here it should be given as in pertussis night and morning.

In *migraine* and *neuralgia* it is valuable. In *torticollis*, hypodermically, it is curative. *Dysmenorrhea* and *ovarian neuralgia* are relieved by atropine. *Excessive secretion of milk* is controlled, even to abolition of the flow, by applying linen soaked in a 3-grain to the oz. watery solution till the mouth is dry. With *cathartics* atropine increases peristalsis and prevents griping. As a *mydriatic* it is invaluable to the oculist. Its action on the skin renders it of great value in the faint or *retarded eruption* of scarlet fever and erysipelas, where depression is a feature. In *hemorrhage* and *congestion* atropine is often very effective.

Where there is uncertainty as to individual susceptibility to any powerful drug it is ever wise to begin with a small dose, and to repeat it frequently till the effect has been produced, when it should be given at longer intervals if still required, for it is impossible to know in any disease how much will be needed to control symptoms. The *gradual* method is, therefore, the scientific and safe one. It is to be remembered that atropine is better borne by children than adults, and better by brunettes than blondes.

In conclusion, I will add that many of these results are matters of personal experience, while all of them are insisted upon by excellent modern authorities. Atropine is only one of the list of active principles now definitely isolated, with which the pursuit of modern medicine is a science and a pleasure.

13th and Clay streets.

GANGRENE OF SCROTUM WITH ERYSIPELAS, CAUSED BY STRICTURE AND EXPOSURE TO COLD.

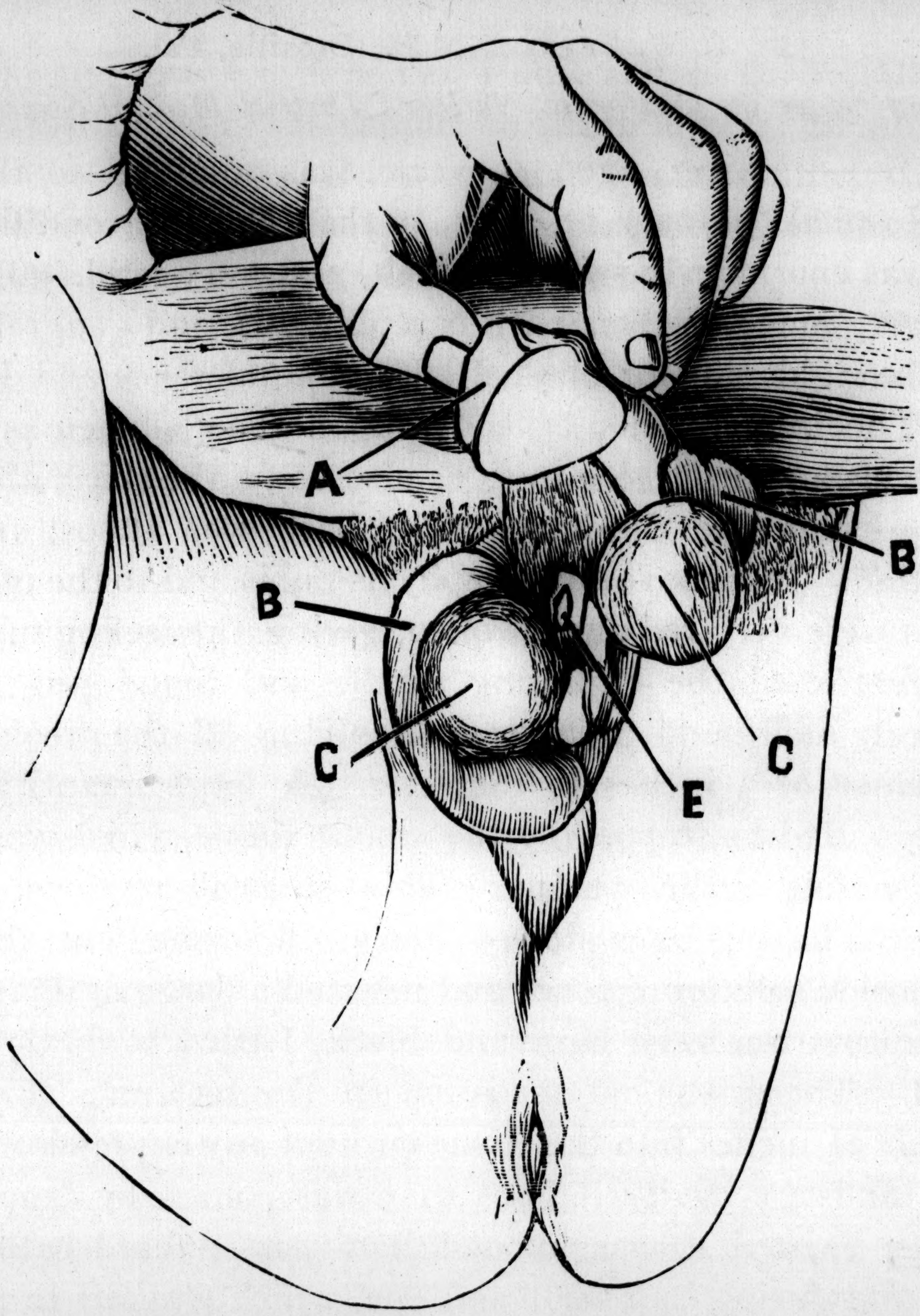
By T. W. SERVISS, M.D., Oroville, Cal.

Read before the California Northern District Medical Society.

Frank S——, miner, aged 49 years, was admitted to the Butte County Hospital, January 12, 1894, in the following condition: The scrotum was enormously swollen, black, and very fetid. The penis was also very much swollen, with paraphimosis, and gangrene of the skin on the right side for one-half the circumference and its whole length. The inflammation extended upon the abdomen as high as the umbilicus and from side to side; also down the thigh about one-third the distance to the knee. The back was almost free from inflammation. Just above the symphysis pubis and to the umbilicus, the tissues were very red and swollen, giving the feeling of fluctuation. I first used the exploring needle and found pus. I then opened freely and found an abscess involving all the areolar tissue for a distance of 3 inches in diameter. A large quantity of pus came away. It was stopped by the areolar tissue, which was decomposed, presenting at the opening. This was easily removed and was very fetid. The pus now flowed freely. I washed out the cavity with bichloride solution 1:2000, and inserted a large drainage tube. As the scrotum was very large and black, I tried to find pus here, but failed. There was no sensation in the scrotum. I passed a small trocar 2½ inches into the tissue without any expression of pain, nor did I find any cavity. The urine was passed by drops. The penis being twisted it was impossible to pass a hard catheter. I succeeded in twisting in a small soft one, which was left in place for 48 hours.

The whole inflamed surface, together with the scrotum, was dressed with bichloride solution, 1:2000. The dressing was changed twice daily. In about one week the scrotum came away, together with the skin upon the right side of the penis, leaving both testes fully exposed, and an opening in the urethra, at the base of the penis, the size of a 10-cent piece, through which the urine passed. The abscess above the pubes now discharge along the spermatic cord upon the right side, causing the testes to be bathed in pus. This drained the cavity much better than the tube above. The tube, however, was left in place for the purpose of washing out the abscess cavity. At this time a photograph of the parts was taken, from which the accompanying illustration has been engraved.

The testicles were dressed with aristol, after being well washed with bichloride solution. In about 3 weeks the abscess cavity upon



A—Glans penis. B B—Remnant of scrotum left and right side. C C—Testicles exposed. E—Opening in urethra at base of penis.

the abdomen was closed. The testicle upon the right side was covered with granulations. The small strip of scrotum upon the right side became adherent to the testis at its edge, and as the testis retracted this piece of scrotum yielded, and the testis rolled underneath until it became almost completely covered with scrotal tissue. The left testicle was drawn up into the external ring and became very much smaller. Here, just below the external ring, was a small pointed piece of scrotal tissue remaining, and this also began to elongate and will assist very much, later on, as a flap.

At that date the penis was almost healed, and was smaller in size. The abscess opening along the spermatic cord had closed, and the swelling had gone down. I thought it time to see what could be done with the strictures, which had been of 15 or 20 years' standing. He had been treated at that time and later without success. In passing a sound I found the first stricture just before reaching the opening in the urethra. This was early cut through. The second was about 2 inches deeper than the opening in the urethra (which I thought should not be closed until the strictures were treated). This stricture was difficult to reach with an Otis urethrotome, for the penis was twisted by reason of loss of tissue upon the right side. I cut through this stricture, and the instrument then passed into a false passage. Not being able to get through the third stricture, which was a short distance behind the second, I waited for these two passing large sounds from time to time through the two already cut.

Upon passing a small bougie I found two more strictures, and from the bent appearance of the bougie when withdrawn, I supposed the urethra was curved from side to side or the opening through the strictures were upon opposite sides of the urethra. After waiting some time I succeeded in getting through the third stricture, but unfortunately could not get through the last one for reasons already stated. The penis was very easily irritated, would inflame and swell up after any rough usage. This interfered very many times during the treatment. Patient now passed water quite freely through the opening in the urethra, which I hoped soon to close. The right testicle was almost covered by loose scrotal tissue. The left was well drawn up into the external ring.

Unfortunately, at this stage, I was taken sick with fever. My patient left the hospital and got drunk, and when he returned the Superintendent would not admit him without an order. He then disappeared and I have not heard from him since.

THE DIETETIC AND THERAPEUTIC MANAGEMENT OF TYPHOID FEVER.

By Thos. Ross, M.D., Sacramento, Cal.

Read before the California Northern District Medical Society.

The gravity of typhoid fever, whose germs may live indefinitely in the frozen north and flourish in the torrid south, so universal is its distribution; its numerous complications, the peculiar manner in which it affects the digestive tract, its long duration, and the number of its victims, make the treatment of this disease a subject of great interest to the physician.

It is said that in this country typhoid fever carries to an untimely grave, fifty thousand people annually. The number of typhoid fever cases in a community, is directly proportionate to the sanitary condition of the locality.

Osler says "the profession was long in learning that typhoid fever was a disease *not* to be treated by medicines. Careful nursing and a regulated diet are the essentials in a majority of cases."

Prophylaxis.—The generally accepted theory at the present time is, that typhoid fever is caused by a specific germ—the bacillus of Eberth, which is found principally in the solitary and agminate or Peyer's glands of the small intestines, especially in the neighborhood of the ileo-cecal valve. These bacilli escape in the alvine dejections, frequently make their way into the source of the water supply of cities and families, and are thus introduced into the system. In this way individuals and whole communities become infected.

I believe that typhoid bacilli can gain admission into the body in other ways than by contaminated water, viz: from the soiled clothing of a typhoid fever patient, and from inhaling the gaseous emanations of typhoid excreta, or even from vomited matter.

Filthy surroundings and bad sewerage, with a moderate amount of heat and moisture, are favorable conditions for the development and multiplication of the typhoid bacilli. We, therefore, should not place our entire reliance on a pure water supply, but see that our sewerage is good, and that the sanitary condition is as perfect as possible. Rigorous disinfection of the excreta will accomplish much in preventing the spreading of this disease. The manner of disinfecting the evacuations is familiar to all, and as it can be found in any text-book on practice, it is, therefore, unnecessary to describe it.

Residents of, or visitors to, localities where typhoid fever is prevalent, should boil all drinking water or milk. In California we have a striking example of the prophylactic effect of the use of boiled water, in the immunity of the Chinese, which is undoubtedly due to their exclusive use of tea for drinking purposes. Has any member of this Society ever observed a Chinaman suffering from typhoid fever? During a residence of 24 years in this State, I have not seen or heard of a single one being so infected.

Dietetic Treatment.—As this disease is a specific affection of the intestinal tract, in which digestion is always deranged, the digestive fluids scanty, and even their chemical composition changed, it becomes apparent that the dietetic treatment is of paramount importance.

In the general management of this disease, the patient should be strictly confined to bed, and should remain there until convalescence is established. The room should be large, airy, and well ventilated, but the patient should not be exposed to air currents. The temperature of the room should be from 65° to 70° F. The mattress should be covered with a rubber sheet, and should be moderately soft. The bed clothing should be well aired daily. Scrupulous cleanliness about the patient, room, and attendants, must be observed. The dejections should be thoroughly disinfected, and promptly removed. The patient's mouth should be frequently washed with a mixture composed of listerine and glycerine āā ℥ii, solution of chlorate of potash ℥iv. As the demand for water is great, it should be given freely; it increases nutrition, reduces temperature, and assists elimination.

Food that is fluid, nourishing, most easily digested, and leaving the smallest amount of residue, is the most appropriate. Milk is therefore entitled to the first place. It should be given in quantities of one to four quarts in 24 hours, according to the digestive capacity of the patient, and at stated intervals, every 2 or 3 hours, except at night, when the patient should not be disturbed except for urgent reasons. The milk should be boiled and diluted with lime water.

If undigested casein is found in the stools, milk is being given in too large quantities. The advantage of adding lime water is, that that it prevents the casein from forming in large lumps in the stomach, thus interrupting digestion, and producing or aggravating diarrhea. Hydrochloric acid and pepsin are valuable additions to milk to assist in its digestion. Fairchild's peptonizing tubes afford an elegant and efficient means of preparing the milk for the most delicate stomach. If milk disagrees, give mutton, chicken, oyster broth, or beef tea. Buttermilk is often enjoyed and is readily digested. Barley gruel and egg albumin may be given. Koumiss and all carbonated drinks are relished by the patient, but are contraindicated, because they increase meteorism. Fruits are not allowable.

As alcohol is a food in this disease, supplying oxygen and preventing waste of tissue, it should generally be given in the second week. If given at this time, in doses of one tablespoonful of whisky or brandy, three times a day, the necessity of giving it hourly later on will often be prevented.

It is a common and good practice to administer whisky or brandy in milk, in the form of egg-nog. Osler says that alcoholic stimulants "should be given in cases where weakness is marked, fever high, and pulse is failing; when the heart-beat is feeble and the first sound becoming obscure, or when there is subsultus, delirium, and dry tongue. Brandy should be given freely in such cases. From 8 to 12 ounces a day is a moderate amount."

The therapeutic management of typhoid fever may be considered under four heads: Antipyretic, Antiseptic, Hydro-therapeutic, and Symptomatic.

Antipyretic Treatment.—The continuous fever characteristic of this disease, causes derangement of digestion, waste of tissue, especially the muscular, anemia, and general atony. Remedies calculated to lower the temperature have, therefore, been anxiously sought. It was confidently expected, when medicines having this effect were secured, the disease could be checked, or its duration shortened, and the ill effects of the fever reduced to the minimum. The coal tar derivatives have been highly extolled and extensively used in typhoid fever, but while their administration lowers temperature with certainty, it is found that they in no way shorten the duration of the disease or mitigate its severity. They have the serious objection of depressing the action of the heart, which is already taxed to the limit of its endurance in severe cases.

The temperature can be reduced by the administration of antipyretics, or by the external application of cold. Of drugs having this effect I may mention antifebrin, phenacetin, antipyrin, and quinine. Of these, antifebrin is the safest, in doses of from 2 to 5 grains every 2 or 3 hours. Aconite and veratrum viride are too depressing and are, therefore, dangerous. Antipyrin is a cardiac depressant, and if used at all, should be given with a stimulant, or with digitalis.

Contradictory views with reference to the beneficial effect of quinine, in this disease, are entertained by the profession. Thus, Liebermeister, in his exhaustive treatise on typhoid fever, in Ziemssen, says: "My own experience, at least, after having treated 1500 cases with quinine, in doses that would formerly have been considered as dangerous to life, gives no result that would indicate any specific influence of the drug in typhoid fever, nor any power to cut the fever short." Bartholow, in his "Practice of Medicine," states that "Liebermeister, who is a strong advocate of hydro-therapy, says, that if he were forced to the unpleasant alternative of adopting one or the other of these two means—cold water or quinine—he should, in the majority of cases, choose the latter."

Quinine in large doses (gr. 15 to 30) will reduce the temperature, but it is doubtful if the patient is benefited thereby, and the disagreeable symptoms that follow its use, in these doses, are surely not beneficial. Quinine in tonic doses (gr. 2 to 4) three or four times a day, is indispensable in the treatment of this disease. It improves digestion and is a good stimulant and antiseptic. On account of the malarial element that is observed in most of our typhoid fever patients, in this country, the use of quinine cannot be omitted.

Antiseptic Treatment.—Many so-called antiseptics are recommended in the treatment of typhoid fever—as calomel, dilute nitric, hydrochloric and nitro-muriatic acids, iodine, ergotine, salol, carbolic acid, tr. ferri mur., beta napthol, thymol, menthol, sulphocarbolate of zinc, antitoxin. Remedies that will effectually destroy the specific cause of this disease, are as yet unknown. Wunderlich states that a few large doses of calomel, given at the commencement of the fever, will lighten the attack, and some even claim that, in favorable cases, a 10-grain dose will abort the disease. A moderate amount of diarrhea does not contraindicate its use, but if the bowels are very loose, calomel should not be employed. It is a common practice to administer, at the beginning of the disease, $\frac{1}{2}$-grain doses of calomel every half hour, until the bowels are acted on freely, thus removing all deleterious substances from the intestinal canal, and many claim that it has a direct antiseptic effect.

The administration of the dilute acids stimulates the secretions. They may be given with or without pepsin to aid digestion, and ox gall to complete the digestion of the intestinal contents. The intestinal canal is full of bacteria in health, which are kept from multiplying by the germicidal effect of hydrochloric acid. By keeping the stomach in an acid condition, we not only prevent their multiplication, but also destroy their activity. Dr. G. A. White, Medical Superintendent of the Sacramento County Hospital, informs me that he has found the administration of dilute hydrochloric acid, in doses of 15 minims, after eating, combined with pepsin in some cases, or with nux vomica in others, efficacious in the treatment of typhoid fever.

Dr. W. F. McNutt, of San Francisco, says that during the past four years, in nearly every case, he has given tincture of ferric-chloride in doses of from gtt.x to gtt. xx in glycerine, every 4 hours, beginning its use as soon as the affection is positively recognized. He states that it exerts a beneficial effect upon the mucous membranes by its astringent and tonic properties, limits hyperemia and consequent exudation, the tendency to ulceration and to hemorrhage, while as a blood food it prevents waste of tissue. He often adds with benefit $\frac{1}{50}$ gr. of mercuric bichloride to each dose, and when gastric symptoms are prominent, 1 or 2 drops of the solution of arsenious acid, or even both. Other physicians, who employed this treatment during the epidemic of typhoid fever which visited Oakland about a year ago, are reported to have obtained highly satisfactory results.

Iodine is said to have a specific effect and is recommended to be given with carbolic acid, thus: Tr. iodini ʒii acid carbolici ʒi, M. S.—1 or 2 drops three times a day.

It is claimed that benzo-naphthol, in doses of 45 to 60 grains daily, mitigates and even arrests typhoid fever; that it arrests auto-intoxication or secondary infection. It, however, is found to be inefficient.

Sulpho-carbolate of zinc, given in 2-grain doses, in capsules, is said to reduce temperature and to act as an intestinal antiseptic. Typhoid antitoxin is the name given to the sterilized culture of typhoid bacilli, the intermuscular injection of which, is said to be curative of typhoid fever. It is prepared by inoculating the sterilized bouillon of thyroid glands with a culture of typhoid bacilli. Experiments are being made in regard to the therapeutic application of antitoxin, the results of which are looked forward to with interest.

At the last meeting of the American Medical Association, in San Francisco, Dr. Woodbridge, of Ohio, read, in the Section on Practice of Medicine, a remarkable paper on the treatment of typhoid fever. He advanced ideas totally at variance with the generally accepted views of the treatment of this disease, and claimed astonishingly successful results. He stated that in a large practice, where he had more than his share of fever patients, for thirteen years, he had had no deaths from typhoid, malarial, or any continuous fever, and that in many cases he aborts the disease. He says if you accept the theory that typhoid fever is caused by a germ, you must accept its corollary that the germ can be destroyed; then, as a legitimate sequence, if the physician who accepts this theory sees his patient sufficiently early, and treats every suspected case on the first appearance of suspicious symptoms, he will rarely see a typical case of typhoid fever, and never a death from the disease. His specific formula is:

Podophyllin	gr. i
Hydrarg. chlor. mit.	ʒ i
Guaiacol carb.	ʒ vi
Thymol	ʒ v
Menthol	ʒ i
Sacchar. alb.	℥ ii—M.

In doses of 2 or 3 grammes, alternated with eucalyptol m.v to x; guaiacol m.ii to v. He says that as this mixture is practically harmless, it may be given in almost unlimited quantities, but he advises beginning with exceedingly small doses, thus avoiding early catharsis. He allows his patients to sit up, walk around, and even to eat solid food. He says that in several instances he had patients eating beef steak, when they were yet covered with rose spots, the other symptoms having already disappeared.

Hydro-therapeutic Treatment.—When the temperature is above 103° F., baths at a temperature of 80°, every two hours, are indicated, until the temperature comes down. Baths not only reduce the temperature, but Lightenstein, Bland, Zeimssen, and others, state that the stimulating effect of the water on the peripheral nerves of the whole body, is reflected to the nerve centers, and from them to the various organs of the body. This causes them, for the time being, especially the heart and lungs, to perform their functions in a physiological way. It is claimed that the death rate has fallen from 40 to 7 per cent. by the use of cold baths. Bland claims that when patients are treated systematically, by means of cold baths, during the first week of the disease, the death rate is only 1 per cent. His plan is to place the patient in a bath at 65° F., and allow him to remain there 15 to 20 minutes, until a sense of chillness, or even chattering of the teeth, may be observed. The patient is then taken out, thoroughly dried, and put to bed.

Others never use a bath lower than 73° F., and of no more than 10 minutes duration. This is the safer plan. Stimulants should be used in case of collapse. It is good practice to give the patient a tablespoonful of brandy just before taking a bath. Baths should be repeated every three hours. The advantages claimed for the use of cold baths are: They diminish fever, the intellect remains clearer, the patient takes nourishment better, they have a diuretic effect, and bed-sores are rare. Cold baths should not be used when there is intestinal hemorrhage, however slight, when there is a suspicion of peritonitis, great weakness or great sensitiveness, when the excitement caused by the bath might do harm, when there is any evidence of laryngitis, otitis, or nephritis.

Accumulated hospital experience testifies to the good results following the use of cold baths, but on account of the difficulty of giving them in private practice, and the opposition of the laity, this treatment is only used in hospitals where every convenience is at hand. The wet sheet is a convenient and beneficial way of applying cold. The principle of its action is the same as in cold baths. Sponging the surface with tepid or cold water, or water and alcohol, is usually employed in private practice, to reduce fever by cold. It generally adds to the comfort of the patient, reduces fever, relieves nervous symptoms, and occasionally induces sleep.

Symptomatic Treatment.—The symptomatic, or expectant treatment of typhoid fever, is the rational line of action to adopt. It consists in supporting the patient in every way possible, and by all that is included in the term, "good nursing." Treat prominent symptoms and complications as they arise. Have always painted, in large letters, before your mind's eye, the maxim, "Be sure you do no harm."

Hyperpyrexia is best treated by cold sponging, cold packs and cold baths. The coal tar product should only be used in obstinate cases, when other means fail. Tympanitis, being due to gas confined by a sphincter in a powerless bowel, should be relieved, by letting the gas off by means of a catheter, introduced well up the rectum. Assafetida, or turpentine, internally, and turpentine stupes, externally, are often beneficial, as is also an ordinary enema with or without assafetida.

Intestinal hemorrhage. Here absolute rest is necessary. In bad cases avoid the use of the bedpan; allow the patient to pass his motions in a draw sheet; cold applications to the abdomen, even ice, if not too heavy. Powders, containing powdered opium gr. $\frac{1}{2}$ and acetate of lead gr. i, every hour, is a favorite remedy. Remedies by the mouth are sometimes too slow in their action. Morphine, gr. $\frac{1}{8}$, and ergotine, gr. 3, subcutaneously injected every hour, until the hemorrhage ceases, afford the best result. Epistaxis need not be checked, unless sufficient to cause alarm. This is sometimes a troublesome symptom; it depletes the patient, already exhausted by this protracted disease; cold water or ice, applied to or in the nose, sometimes succeeds in checking it, as does, also, the insufflation of finely triturated astringent powders, or the injection of hot water. These means failing, the nose must be plugged. Hodgen's method of using a piece of condom, tied on a portion of a catheter, introduced in the nose, and then inflated with cold water or air, is said to be efficient.

Diarrhea is generally controlled by the administration of bismuth subnit., ʒ i; morph. sulph. gr. i, in 6 powders, 1 to be given every three hours. The stools should be examined, to see if the diarrhea is not caused by the indigestion of milk, which is indicated by the appearance of caseine. For constipation, give calomel at the beginning of the disease, in the latter stages enemeta. Constipation after the first or second week never does harm. The bowels, however, should be moved by an enema every third or fourth day.

Headache is best relieved by the application of cold to the head and the administration of the bromides internally. Insomnia is relieved by small doses of morphine (gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$) given in the afternoon, rather than at bedtime, as the first effect of opium is stimulating and often keeps the patient awake. Chloral, if used at all, must be employed with caution, on account of the weakness of the heart. I have found the cool sponge-bath to have a soothing and quieting effect in some cases, inducing sleep. Dover's powder, in doses of 5 to 10 grains, in many cases, is all that is required for the relief of this symptom.

In collapse and heart failure, the hypodermic injection of stimulants is our mainstay. Keeping the body perfectly clean and dry will often prevent bed-sores. The patient should be encouraged to change position in bed frequently, all bony prominences subject to pressure should be frequently sponged with alcohol and tannin to harden the skin. I have used, with good results, the ordinary rubber adhesive plaster, smoothly applied, over the parts exposed to pressure. Peritonitis is usually caused by perforation of the bowel, and is generally fatal. No medical treatment is of any avail.

The Management of Convalescence.—A typhoid fever patient is often, in convalescence, a greater source of concern to the physician than during the active period of the disease. The patient has an appetite so ravenous that it is extremely difficult to obey the positive and oft-repeated instructions of his physician to refrain from eating solid food. Indiscretions in diet during convalescence often induce a relapse, and occasionally cause perforation of the intestine. I have seen several fatalities due to the ingestion of solid food in this disease at too early a date. One, on the tenth day after the subsidence of the fever, caused by eating beef steak. Another, a girl of 18 years, died on the fourteenth day from eating apple pie. The patient should be kept quiet, bodily and mentally, taking only gentle exercise, which should be gradually increased.

530 J street.

NOTES ON A CASE OF SARCOMA OF THE TESTICLE TREATED BY OPERATION AND SUBSEQUENTLY BY ERYSIPELATINE —DEATH—NECROPSY.

By G. Childs Macdonald, M. D. (Brux), F. R. C. S., Ed., M. R. C. S. E., Sausalito, Cal., Surgeon San Francisco Polyclinic, and Philip King Brown, A. B., M. D. (Harvard), San Francisco, Cal., Assistant Physician San Francisco Polyclinic.

On May 12, 1894, I received a telephone message asking me to meet two medical gentlemen at a case of strangulated inguinal hernia, with the intention of my operating. On arriving at the patient's house, I was shown a young man 27 years of age, who complained of pain and swelling in the left portion of the scrotum.

The following history was given by the medical attendant: Patient, in May, 1893, noticed a painless enlargement of the left testicle, the gland being larger than a hen's egg; he consulted a a medical man in the early part of the following July, who said he was suffering from a strain, giving him some camphorated oil to rub the part. In August he visited another surgeon, who told him he had a rupture and gave him a truss. The tumor, after the application of this instrument, gave him much pain and increased in size, for the relief of which he was given various liniments and lotions. He continued this treatment until December. The scrotal mass had now reached the size of a closed fist, the truss giving more and more pain. On February 4, 1894, he visited the Cooper College. He was examined, no diagnosis being made; but he was advised to leave off the truss and to return next day, both of which he failed to do. On the 5th of May, he suffered considerable pain and continued to do so until the 7th, when he was unable to get about and took to bed. On the 9th, he sent for his first medical attendant, who diagnosed strangulated hernia, ordered hot fomentations, etc. On the 11th, the second physician was called and agreed with the previous diagnosis. There was no family history which would point to anything of moment.

On examination, I found the left half of the tumor occupied by an oblong mass, the size of two closed fists, hard and unyielding in the lower segment, fluctuating above. The inguinal canal was distended with fluid at high tension. The whole tumor was inflamed and tender, no doubt caused by the numerous and frequent applications. It was irreducible, dull on percussion, with no impulse on coughing, at what would have been the neck of the sac. The bowels had been freely moved that morning. There was nothing therefore in the history or symptoms, subjective or objective, that would lead one to suppose a rupture existed. My diagnosis of sarcoma of the testicle was received by my medical friends with some incredulity.

The patient was prepared for the operation in the usual manner, and placed under chloroform by one of the physicians. I was in the middle of the excision when, on looking up, I noticed that respiration had ceased, accompanied by widely dilated pupils. I laid aside my scalpel and commenced vigorous treatment and artificial respiration for fifteen minutes, until breathing had become reëstablished and the pupils contracted. During the whole of this time the pulse was good. The operation had to be completed under ether and chloroform. The tumor was non-adherent to the scrotum, except in places to the parietal layer of the tunica vaginalis; neither was the albuginea perforated. The upper fluctuating portion noticed before operation proved to be, as was believed, a simple hydrocele. The incision was prolonged into the oblique muscles, and the cord, which was somewhat thickened, removed high up, having previously been ligatured with stout Chinese cable twist. The tumor when removed weighed one pound. The edges of the incision were brought together with silkworm gut. Excepting at the upper angle of the wound, healing took place by first intention. The ligatures round the cord came away on the tenth and he was able to sit up on the fourteenth day. A microscopcial examination made by Dr. Philip K. Brown showed the mass to be a simple round celled sarcoma.

At the end of one month from the operation, he commenced to complain of pain in the leg and back, with edema of the former. The pain was relieved by flexing the limbs and trunk. The superficial abdominal veins became enlarged, pointing to deep pressure on the inferior vena cava. On examination, the left iliac and lumbar glands were discovered to be enlarged. He was able, however, three weeks later, to take a trip to Lake Tahoe, and on returning felt evidently stronger. The glands had greatly increased in size, forming a continuous mass along the lumbar spine. The epigastric veins were enlarged to the size of a moderately thick clay pipe stem; there was occasional vomiting and general emaciation.

Feeling how hopeless the case was, I decided to act on Dr. P. K. Brown's suggestion and to inoculate the patient with erysipelatine. Dr. Brown kindly undertook this part of the case. The following are his notes of the treatment by toxic products of the bacillus prodigiosus and the streptococcus erysipelatosus:

Note by Dr. Philip King Brown.—The patient, under Dr. G. C. Macdonald's direction, first came to my office on June 29th. He was greatly emaciated, and had noticed the tenseness and slight distension of his abdomen. He vomited only occasionally, and complained of a feeling of general malaise. Seven weeks later I saw the patient again, the family having decided, at Dr. McDonald's earnest request, to try the method described by William Coley, of New York, from whom I had obtained the necessary toxic products. At this time the patient was in a much poorer condition, the abdomen being quite full for so emaciated a person. He was vomiting after nearly every meal. The heart was displaced upward; pulse 158, regular and strong, stomach distended, liver and spleen normal. A hard mass was outlined in the median line extending from close contact with the liver to a point an inch below the umbilicus. The tenseness of the abdominal wall prevented my obtaining any exact idea of the size of the mass. There was nothing abnormal in the urine. There were points of tenderness on its right side. The growth at the site of the operation was evidently recurring.

An injection of 8 mm. (maximum dose) of the toxine was given in the subcutaneous tissue over Scarpa's triangle on the left side. In half an hour the temperature had risen from 99° F. to 101.2°. It reached its highest point fifteen minutes later, when it touched 101.8°. Four hours later it was 101°, and the following morning it was 99.5°. There were no symptoms attributable solely to the injection, save a slightly increased drowsiness. The absence of nausea and chill were especially noted. Two days after the first injection I repeated it in about the same spot, this time giving 10 mm. The temperature rose in ten minutes from 99.5° to 100.9°, two hours later to 103°, the pulse remaining at 140 all the time. There were no other symptoms. The following morning, twelve hours later, the pulse was 100° and the temperature normal. This pulse rate was the lowest it had been since I first saw the patient.

The injections were continued every 48 hours for two weeks. The site of the injection became red, indurated, and tender, so, after the fourth one, I began to inject directly into the small recurrent tumor on the end of the cord and just above the scar of the operation, using at first only 6 minims to each injection. The only variation in symptoms occurred after the fourth injection of 10 mm. in Scarpa's triangle. The temperature rose in an hour to 103°. Three and a half hours after injection patient ate a light supper, became much nauseated, and vomited without relief, the nausea continuing for several hours. There was no chill, but the patient felt very weak, and a profuse perspiration broke out after the nausea stopped. It was 36 hours before the temperature fell to normal.

Beginning the injections into the tumor with 6 minims they were increased 2 minims at a time until 10 had been reached, but with less and less constitutional disturbance. The temperature remained normal on the off days, and rose not higher than 101.5° after the injections. There never was a chill, and the occurrences of nausea and perspiration were not repeated. The pulse grew slower and less full and bounding, and the patient seemed better in many ways.

The condition of the recurring tumor during these injections was interesting. While the injections were being made into the subcutaneous tissue adjoining it in Scarpa's triangle there was no change, but the moment they were made into the tumor itself it began to increase in size, was very much inflamed and tender, and became adherent to the skin.

It was at this time, about the beginning of the third week of the treatment, that in the course of an examination of the abdomen and chest a small, freely movable lump was discovered between the skin and the seventh rib in the left axillary line. It must have developed within the ten days preceding.

The irritation from the tumor in the groin troubled the patient so much that he begged a few days rest for the sake of noting any change which might come without the injections. They were accordingly stopped for a week, during which time it seemed best to remove the tumor in the groin. This Dr. Macdonald did, and as soon as the patient recovered fully from the operation the injections were begun again, this time at various points around the site of the operation. A fluid, said to be stronger than the original toxine, was used this time, the maximim dose being 8 minims, and the injections were given after the first few by a member of the patient's family, who was a trained nurse. The effect grew less and less, and the patient gradually failed, and died on October 26, two months after the first injection.

Necropsy.—The general appearance of the body was but slightly changed from its appearance on date of my first examination. It was more emaciated, and the abdomen was more distended. The site of the primary tumor was occupied by a mass the size of a goose egg, and the scar of the second operation had been already involved by the growth. The subcutaneous growth in the left axillary line remained unchanged in size. The distention of the abdominal veins was not increased. The abdominal organs presented no points of special interest except for the evidences of long passive congestion. The posterior part of the abdominal cavity, from a line between the eighth ribs to a line 2 inches below the umbilicus, was occupied by an immense growth about 6 inches long, 4 to 5 wide, and 2 to 3 thick, involving the lumbar and mesenteric glands. The growth pressed closely on the under side of the liver and pressed the greater curvature of the stomach forward. It had almost completely surrounded the duodenum for a distance of 2 inches, and was very closely adherent to it at that place where the mesenteric glands were involved. In no other part was the intestinal tract adherent to the tumor, which simply forced the intestines to either side. It had not begun to break down, and was in general quite firm, especially the smaller and superficial nodules. The mass was quite firmly adherent to the posterior wall and lay exactly in the middle line, extending equally on either side. Its weight was about 10 pounds. The thoracic viscera presented nothing of interest.

In presenting a case of this kind the main object is to call attention to certain of the difficulties encountered in the course of a treatment of which so little is generally known. The details of the treatment are given in the reports of several of Dr. William B. Coley's cases, the various methods of preparation of the toxines are described, and the maximum and minimum doses given. The toxine was furnished by Mr. B. H. Buxton, to whom Dr. Coley kindly referred me, and the preparation was similar to that used by Dr.

Coley in his successful cases. The injection of the maximum dose in this case caused none of the constitutional symptoms attending an attack of erysipelas except the rise in temperature. Coley generally found "the reaction following injections of this fluid was similar in character to that caused by living cultures, but somewhat less severe." Even an increase of the dose to nearly twice the maximum used by Coley in a majority of his later cases caused no other symptom save vomiting, and that only on one occasion. There appeared to be no different effects whether the injection was given into the smaller tumor or into the adjacent subcutaneous tissue, except that the tumor markedly increased in size immediately after the injections were made into instead of near it. The intra-abdominal growth, as far as could be determined, increased steadily in size from the time Dr. Macdonald first made out an enlargement of the lumbar glands some weeks after his operation on the testicle. The location of the growth in the abdomen made injections into it impossible. The temporary improvement in the patient's condition, following the beginning of the injections as shown by cessation of vomiting and increased strength, may possibly be attributed to some effect on the larger tumor, but it seems more probable that the close attention to the patient's diet and habits would account for it.

In regard to the dosage in a given case, this much may be said from a review of Coley's cases and my own experience: It certainly is impossible to determine a dose which shall serve as a maximum or minimum in any case. Furthermore, while the process of preparation of the toxine is in its experimental stage it seems to me unwise that its use should become general. As Biggs and Prudden have pointed out in their report to the Health Department of New York city in regard to the purity and uniform strength of the diphtheria anti toxine, "the efficiency of the remedy and the security of those to whom it is to be administered from any possible danger in its use, depends upon the skill and reliability of those engaged in its manufacture;" and further, "careful and delicate tests are required at every stage of its preparation, and the strength of each lot must, when it is finished, be determined in the most exact way."

In this country, except with the facilities for the preparation of these toxic products which are afforded by the Loomis Laboratory in New York, and a few other such places, accurate methods are almost impossible, and the use of remedies improperly prepared is very dangerous. One case of general streptococcus septicemia has come to my notice as a result of this, and the investigation of the subject in most skilful hands in Boston and Baltimore has not been attended with favorable results. Coley gives a possible means of explanation of the failure of others in producing the satisfactory results that he has obtained, by stating that all of his successful cases were treated with toxines from cultures from a fatal case of erysipelas, and concludes that "cultures obtained from any but a virulent case of erysipelas are of little value." I mention this simply to emphasize the fact that the manufacture of these products is in an experimental stage, and that before any conclusions can be drawn, as the result of general experience in these cases, a toxic product of constant strength must be produced and placed in general use.

Remarks by Dr. G. C. Macdonald.—The foregoing was a typical case of round-celled sarcoma running the usual course, and termination when neglected. Had the diagnosis been made sooner, and had operative procedure been undertaken at the initial stage, the man would have probably been alive to-day. Practically the toxine had no effect on the growth, on the contrary it caused the recurrent tumor, when injected into it, to increase rapidly; nevertheless I would not condemn its use because of failure here; we may be on the right track, which further experimental labor may crown with permanent success. A fact worthy of record in the case is that, though the kidneys and their vessels were subjected to great pressure by the immense abdominal growth, they showed no evidence of degeneration either microscopically, or by their secretion, which remained normal throughout. It might be supposed that, owing to implication of the duodenum, the stomach would have shown some evidence of dilatation. This, however, was not the case.

OBSERVATIONS OF THE TREATMENT OF ABORTION.

By F. L. Atkinson, M.D., Sacramento, Cal.

Read before the Sacramento Society for Medical Improvement.

I can recall nothing in my practice that has given me more anxiety than the management of abortion. In the various medical works no definite mode of treatment is given; in fact very little is said about abortion, except, perhaps, in the medical journals, and in these the discussions are so widely different and so much diversity of opinion is expressed, that, after all, one feels he must rely on his own conclusions.

There is a vast difference in being taught anything and in learning it independently. Acquiring knowledge from personal experience may take a long time and involve a waste of much honest effort; on the other hand, the experience of those of large opportunity, who have thoroughly studied the subject, places the student at a great advantage.

The uterus may be regarded as having three periods of existence: (1) From birth to puberty, when it is wholly unimportant. (2) From puberty to the menopause, when it is in a state of intense activity. (3) From the menopause to the close of life, when it again lapses into inactivity, and finally atrophies.

Abortion is the casting off of the ovum or product of conception before the end of the fourth month. From the end of the fourth month to the end of the sixth month this process is termed miscarriage, and after the sixth month premature labor, owing to the possibility of the fetus being viable.

The causes of abortion can be divided into three clases: systemic, fetal, and uterine. Among the systemic cases of abortion are many connected with the nervous system, and others depending on the condition of the blood; thus, carbon dioxide has as much power in causing uterine contractions as ergot. Malarial poisoning has also been known to produce abortion. Prominent among the nervous causes are chorea and tetanus. Again, many reflex influences may cause an abortion. One of the most frequent of these is sudden fright, resulting in convulsions, placental apoplexy, and finally expulsion of the uterine contents.

As to the vital causes, it may be stated, generally, that any influence causing the death of the fetus will produce an abortion.

Syphilis is a frequent cause of abortion, which in these cases generally occurs at the end of the third month, when the uterus changes its mode of supplying the fetus with the vital fluid, and which is, therefore, the period when nutrition can be most easily influenced. Another factor in the causation of abortion is retroflexion. The immense engorgement of the uterus attending this form of displacement undoubtedly being the excitant.

There are other causes for abortion in this enlightened nineteenth century, which the patient can generally make clear enough to the attending physician if she desire. It is to these cases I wish especially to call your attention, because they are usually incomplete abortions, the physician not being summoned until it is evident that nature, unaided, cannot relieve the uterus. In the absence of considerable hemorrhage it may be possible to check the abortion, or, by judicious management, to secure the expulsion of the entire ovum. In either case the prognosis for the mother's recovery is good. It is quite different, however, when considerable hemorrhage, with a great deal of pain, has occurred before the physician has been called. A vaginal examination at this time will in multiparous women often reveal a portion of the ovum within the internal os.

If the cervical canal be patulous, and the uterus be not firmly contracted, it will usually be possible for the physician to extract the ovum without any special difficulty. If the uterus be then examined with the finger, the patient being anesthetized, clots of blood and debris are readily removed from the interior of the cavity, and a hot intrauterine douche of creolin or carbolic acid solution, followed by a gauze tampon, completes the treatment of such a case.

It not unfrequently happens, even in multiparæ, after the first free hemorrhages have occurred, that the membranes rupture, the embryo escapes and the placenta remains behind. If a few hours have elapsed before the physician's visit, he will frequently find the uterus contracted to such a degree that it is impossible to introduce the finger without dilatation. In primiparæ the uterus may be so tightly contracted upon the retained secundines, that after a few hours the introduction of the large uterine sound may be impossible. This condition of contraction, with retention of a portion of the ovum, is one of the most trying and dangerous that the physician is called upon to meet in practice. Radical statements are frequently made that such a woman is in imminent and immediate danger, and that the attendant should at once dilate the cervix and empty the uterus. While there is danger in delay, if that delay be not accompanied by antiseptic precautions and a judicious observation of how nature treats these processes, there is greater danger in uncalled for interference. This inflicts traumatism upon the genital tract and exposes the patient to the danger of septic infection. It is a well known fact that the uterus seeks to expel any foreign body. If this hint be taken and active interference be abstained from, the natural expulsive efforts, will usually bring the offending body within easy reach of the finger, or instruments of the operator. It must, however, be insisted that such a policy is unsafe without absolute cleanliness and the best antiseptic precautions.

The following case will illustrate this method of treatment. M. Y——, an ill-developed anemic woman—multigravida—gave the following history: About 6 hours previous to my visit she had aborted at an early period of gestation. There was evidence of recent and profuse hemorrhage, and the patient was almost in a state of collapse; the pulse being scarcely perceptible at the wrist, the surface of the body cold, and the respirations sighing and feeble. On making a digital examination I found the os tightly closed and impervious to the finger without using considerable force. I tamponed the vagina with iodoform gauze, carrying a small portion just within the external os. The patient was then stimulated by heat, externally, and small quantities of alcohol internally. She reacted nicely, and 3 or 4 hours later complained of slight uterine pains. The gauze tampon had become saturated with blood and there was some oozing from the vulva. The patient's condition became very favorable and the uterine pains persisting, indicated that a portion of the ovum had been retained. The patient was placed in a suitable position and the genital tract thoroughly irrigated with a 1 per cent. hot creolin solution. An examination then revealed a small placenta in the cervix, which had by this time dilated sufficiently to admit the finger. The offending mass was easily extracted, the uterine cavity gently curetted, removing clots and all extraneous matter, after which the hemorrhage ceased. The douche was then repeated, and a tampon of iodoform gauze applied. The case subsequently went on to complete recovery.

This case is an ordinary one, and is only reported to illustrate that it is not always advisable, and, in the vast majority of cases, it is unnecessary to use the more violent means of extracting an ovum or retained placenta, that are advocated by many obstetricians. If modern antiseptic precautions be thoroughly observed, I can see no harm in permitting portions of the secundines to remain in the uterus a reasonable length of time. During this period nature may be assisted to accomplish the delivery rather than compelled by the harsher and more harmful methods of forcible dilatation.

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OPERATE EARLY IN APPENDICITIS.

By J. HENRY BARBAT, PH.G., M.D., San Francisco, Cal., Demonstrator of Anatomy, Medical Department and College of Dentistry, University of California.

Read before the California Academy of Medicine.

The following cases illustrate the necessity of early operation in appendicitis, perforative, recurrent or acute.

CASE 1. I was called in consultation to see a patient who was supposed to be suffering from obstruction of the bowels which had resisted all purgatives from castor to croton oil. I ascertained that the disease had begun a week previously with abdominal pain and a chill, followed by a rise of temperature. Hypodermic injections of morphine were given, and as the bowels had not moved that day, enemata were ordered, which failed to produce any effect, and resort was had to castor and finally to croton oil, but to no purpose. Two days before I was called, the patient, during a paroxysm of pain, felt something give on the right side in the inguinal region, and the pain which had been more marked on that side, became general over the abdomen and vomiting began. At the time I saw the patient the abdomen was distended, tympanitic and extremely tender, especially over McBurney's point. She was vomiting every few minutes, the vomitus showing no evidence of fecal matter. The bowels had not moved for one week. There were occasional chills, and the temperature was 100° F. I made a diagnosis of perforative appendicitis and advised immediate operation, as offering the only chance of recovery. I gave an unfavorable prognosis, as there was undoubtedly some general peritonitis. It was late in the evening, and the surroundings precluded the possibility of operating at home, so I had her transferred to the hospital, and operated early next morning. On opening the abdomen the distended intestines bulged into the wound, but were prevented from escaping owing to the universal adhesions. Suppurative peritonitis was present, so I did not hesitate to separate the adhesions over the region of the appendix. At the first touch, thin fetid pus welled up between the folds of intestines, and was mopped up rapidly. The cavity was then washed out thoroughly with a sterilized salt solution, and a gauze drain inserted. The patient rallied from the operation, but died 48 hours later from septicemia. At the autopsy, the appendix was found lying behind the cecum, and held firmly in place by numerous adhesions. It was about four inches long and one-quarter of an inch in diameter; three-quarters of an inch from the proximal end, was a small opening, which presented a concretion the size of a small bean, and beneath this a smaller one was found. A timely operation would undoubtedly have saved the patient.

CASE 2. In this case, the patient, a young man, had had 7 distinct attacks of appendicitis before he would consent to an operation. The intestines around the appendical region, were agglutinated, but no pus was found. The adhesions were separated and the appendix found after considerable search. It was short and thick and very much congested, showing signs of recent inflammation. It was ligated close to the cecum and cut off. A loop of intestine was found adhering to the internal abdominal ring, and as it caused a kink in the bowel, it was detached. Free hemorrhage took place from both surfaces. A gauze drain was put in and removed after 48 hours. The patient made a rather slow recovery, owing to his disregard of orders, he having entirely removed the dressing on the third day, and sat on the edge of the bed.

CASE 3. This case occurred in my own family. The patient, my brother, had been in good health until 6 months previous to the present attack, when he was seized with colicky pain extending all over the abdomen, with some tenderness on the right side. Free catharsis and hot applications quickly removed all pain, but he did not feel well for several days following, and had several chills and a temperature of 102° to 103° F. After this subsided he remained well until the morning of July 4, 1894. He retired at 1 A. M., apparently perfectly well, and at 3 A. M. was seized with a severe sudden pain in the abdomen, which soon became limited to the right inguinal region. I saw him one hour after the beginning of the attack, and found him suffering intense pain. The countenance was anxious; pulse, 80; temperature, normal; respirations, 30. Physical examination revealed a localized tenderness not larger than a dollar directly over McBurney's spot. The patient had taken ¼ grain of morphine and had applied hot water bags before he called me, but experienced no relief. I immediately sent for counsel, with the intention of operating if the symptoms did not rapidly subside. It was decided to first endeavor to evacuate the bowels, and 10 grains of calomel, followed by a liberal dose of castor oil was administered, but not retained. The pain became so intense that one grain of codein was injected hypodermically, and frequent inhalations of chloroform used. Further counsel was called and immediate operation decided upon. It was 3 P. M. before we were ready to operate; I was assisted by Drs. F. B. Carpenter and O. J. Mayer, Dr. C. E. Farnum giving the anesthetic. The incision was made at the external border of the rectus. The appendix was easily found; it was free in the abdominal cavity, about four inches long and tightly distended with pus to within ¾ of an inch of the proximal extremity. The mesentery was ligated *en masse*; the appendix was ligated close to the cecum and cut off, the peritoneum being sewed over the cut ends with fine catgut. The abdomen was closed with silkworm gut, the peritoneum being sewed separately with a continuous catgut suture. The patient was out of bed the twelfth day without the slightest sign of disturbance of any kind. The appendix showed signs of previous inflammation, and was completely occluded about ¾ of an inch from the cecum, the occlusion being due to cicatricial contraction. The contents consisted of bloody pus with a fecal odor. The mucous membrane showed several ecchymotic spots, one extending through the entire thickness of the gut, giving evidence of beginning gangrene, and it is probable that rupture into the general peritoneal cavity would have taken place in a few hours more.

While I do not mean to say that every case diagnosed as appendicitis should be operated upon immediately, I cite the foregoing as an example of the different varieties of the disease in which operation was clearly indicated from the begining. The men who never lose a case of appendicitis and who never operate, are those who have patients dying from peritonitis, inflammation of the bowels, obstruction, and other delusive titles, which cover up a multitude of sins. I would certainly prefer to have an incision made in my abdominal wall and find no trouble with the appendix, than to risk having a suppurative peritonitis from a delayed operation.

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DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal.,

HENRY GIBBONS, JR., M. D., Professor of Obstetrics and Diseases of Women and Children' Cooper Medical College, San Francisco, Cal., and

WM. FITCH CHENEY, B. L., M. D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College. San Francisco, Cal.

Opium in Laryngeal Diphtheria of Children.—It is known that dyspnea in children suffering from diphtheria is relieved during sleep, and that opium exerts a favorable influence upon bronchitis in tracheotomysed children. Relying upon these facts, STERN uses opium for the purpose of preventing, or at least delaying, tracheotomy in laryngeal diphtheria caused by croup. He gives from 2 to 5 drops of the infusion of opium, repeating the dose, if necessary. Children over 1 year may take 3 drops, and 3 more in half an hour if not relieved; 3 to 5 drops 3 times a day are generally sufficient. The best results are attained when this remedy is given in beginning stenosis. Stern warmly recommends the administration of opium before asphyxia commences, in the hope of avoiding tracheotomy, but if this operation becomes necessary, opium may still render the patient more comfortable.—*Journal de Médicine de Paris*, October 7, 1894.

Puerperal Herpes.—When herpes appears during pregnancy or soon after labor, its relations to the parturient condition are incontestable. The eruption may occur at any period of pregnancy, but it is generally observed at the beginning of the tenth week; after labor, it breaks out on the third or fourth day. The disease may appear in the same patient during several pregnancies, but not necessarily at the same period. Delivery always markedly increases its violence. Each new attack in the same patient is more severe and more lasting than the preceding. LIVEING refers to a case in which herpes appeared first on the third day after delivery, and recurred thereafter in the non-pregnant condition. BROCQ reports several analagous observations. Beginning, herpes is generally apyretic, but it is sometimes accompanied by a slight degree of fever. The eruption is preceded for a few hours, days or weeks by pain, itching and burning in more or less extended regions of the skin. The eruption, which may appear on the upper part of the body or in the umbilical region, first occurs in simply hyperemic or papular erythematous patches, or in prurigo, and is followed by vesicles. The pruriginous or erythematous eruption may exist for months, or even throughout the whole of pregnancy, before the vesicles appear, but this symptom will appear during the recrudescence following delivery. The crusts which succeed the vesicles are generally thin until subjected to secondary irritation. The disease seldom disappears during pregnancy, but after the marked exacerbation which ordinarily follows labor, this symptom decreases, and cure takes place in a few weeks. Painful symptoms grow more severe as the rash breaks out, and continue as long as it exists, and often survive it. The patient's general health suffers more from pain and insomnia than from the extent of the eruption.—*Union Médicale*, September 29, 1894.

Mechanical Treatment of Uterine Inertia.—When dilatation of the cervix is delayed on account of insufficient uterine contraction, the movable fetal head may be found nearly always above the entrance of the true pelvis. Under these circumstances Dr. Kielman, of Breslau, advises the forced engagement of the child's head in the pelvic cavity by means of manual pressure exerted through the abdominal walls. This method, employed by several obstetricians (Hofmeir, Müller, etc.), in cases of contracted pelvis, sometimes as a means of measurement, sometimes for therapeutic purposes, is the most efficacious treatment of simple uterine inertia in women of normal size. As soon as the head is forced to engage in the pelvic cavity, the cervix begins to dilate with astonishing facility, and delivery is soon effected. But this forced engagement requires energetic pressure, which can only be exercised during profound chloroform narcosis. One hand should be placed upon the child's head, and the other upon the lower maxillary region, and pressure exerted in the direction of the sacral cavity. The bladder should be emptied, and the membranes ruptured before beginning the operation.—*Journal de Médicine de Paris*, October 7, 1894.

Early Diagnosis in Pregnancy.—When a woman misses her menstrual period, she at once thinks of pregnancy; and under certain circumstances, such as the desire for children, or, on the other hand, the absence of a marriage tie, she becomes very anxious to know the facts early. Is it possible to tell her? DR. CHARLES P. NOBLE says (*Philadelphia Polyclinic*, November 24, 1894): It is possible ninety-nine times out of a hundred, by bimanual palpation, to determine definitely between the sixth and twelfth weeks. He relies particularly on Hegar's sign, of which little or nothing is said in the text-books on obstetrics. This concerns the relation of the cervix to the body of the uterus. The shape of the unimpregnated uterus is pyriform, flattened from before backward. When the cavity of the uterus contains a growing ovum, the corpus and fundus develop with great rapidity, while the cervix grows but slowly. By six weeks the ovum has grown sufficiently to make the corpus spheroidal in shape, while the cervix has altered very little. Thus there is formed a spheroidal body resting on a cylinder, and the sphere juts out from the cylinder prominently in every direction. The corpus, too, is softened, and gives a sense of semi-fluctuation when palpated bimanually. Only two other conditions besides pregnancy can cause this sign: (1) Hematometra, due to imperforate cervix, which is very rare and has a suggestive history. (2) Intra-mural fibroid, which does not give semi-fluctuation nor uniform enlargement of the uterus. Corroborative evidences of pregnancy, in the early months, are, violet discoloration of the vagina, most marked beneath the urethra, and velvety softness of the vaginal walls, with marked pulsation in vaginal and uterine arteries. Softening of the cervix Noble considers of much less importance than is usually assigned to it, and a sign on which very little dependence can be placed. LANDAU (*Deutsche med. Wochenschrift*) says the size of the uterus in the first months is much less to be considered than its form and consistence. Anteflexion is increased, the portio is higher, the vagina longer, and the anterior vaginal wall seems stretched. The consistence is softer, and gives a sensation as if the examining finger was against soft butter—it penetrates, finds no resistance, and leaves no imprint.

Pregnancy Mistaken for an Ovarian Cyst.—The following case is reported by REVERDIN, in the *Gaz. méd. de Paris.* A woman, 24 years old, was operated upon for a large ovarian tumor, and cured. Nineteen months later she returned on account of a greatly enlarged abdomen, in which a tumor was perceptible on palpation, which extended to the right side and gave distinct fluctuation. The patient had had her period at different times since the operation, but very faintly. The portio was found normal. Operation was determined upon and performed July 13th. Solid adhesions were found between the abdominal wall and coils of intestines, and in the attempt to release these, the bowel was opened. The tumor, when exposed, did not look like an ovarian cyst, and contained numerous blood vessels. On puncture, turbid fluid was evacuated, but the flow soon ceased, and on drawing out the trocar, a portion of navel cord followed. Since the four months' fetus had little prospect for further development, it was removed with the placenta; and then, because the soft and torn uterus offered some danger for the patient, it was also removed, together with the remaining ovary. The patient was discharged well in 14 days. The error in diagnosis was due to the adhesion of the tumor to the abdominal wall, and the fluctuation of the accompanying hydramnion. Auscultation had been omitted, but would have been useless anyway, in a pregnancy of four months with hydramnion. [The operator was evidently determined that no one in the future should be similarly deceived by this woman.—W. F. C.]

Effect of Applying Cocaine to the Nipples.—GUENEL, of Liège, had been using cognac to bathe sore nipples, but changed to a 2 per cent. solution of cocaine. This stopped not only the pain on nursing, but also the milk. The fissures healed, but the breasts became flabby. The milk secretion did not return until after the cocaine solution was dropped and the cognac lotion resumed. VALENTIN DESARNAUX has twice observed similar effects from the use of cocaine on the nipples.—*Centralbl. f. Gynäkologie*, No. 49, 1894.

New Cure for Enuresis.—NEUGEBAUER tells the following in the *Centralblatt f. Gynäkologie*. In the city of Wratsch, Russia, a boy with enuresis slept with his sister. A female cousin came to visit the family and was put in the same bed. In order to sleep dry, the young ladies tied the end of the little fellow's penis with long hairs cut off from their braids. He did not wet the bed that night, but the next morning a physician had to be called, to relieve the boy of his violent pains.

In the *Post-Graduate*, for November, 1894, amongst the notes from DR. CAILLÉ'S pediatric clinic, in New York, is one regarding a child of seven months, brought in in an apathetic condition, with distended abdomen and a gangrenous prepuce, with a history that he could not urinate. The penis was found encircled by a long human hair, in such a way as to close the urethra and strangulate the prepuce and glans. After removing the hair, the sloughed portion was dressed with moist boracic gauze, and after ten days dropped off, leaving the penis as if circumcised *secundum artem*. Caillé says he can not state under what circumstances the hair got into this locality and position. It is possible that the boy slept with some bedfellow who tried the same cure for enuresis devised by the young ladies of Wratsch.

Tubercle Bacilli in Human Milk.—STRIKER COLES reports in the *Philadelphia Polyclinic* November 3, 1894, the discovery of tubercle bacilli in human milk. The milk of 5 cases was examined, by Dr. D. Braden Kyle, with every precaution to secure reliable results. He found the bacilli in abundance in 2 cases that had marked tubercular symptoms—hemoptysis, cough, night sweats, etc. In the other 3 cases no bacilli were found in the milk, but in these tuberculosis was doubtful—1 had supposed tubercular ulcer of the labia, and the other 2 gave tubercular family histories, but had no definite symptoms of tuberculosis. The mammary glands of both cases in which the milk contained the bacilli, were apparently free from disease, and there were no fissures, or ulcers about the nipples. [This report is very important, because so little heretofore has been published on the subject. Cow's milk has been carefully examined, and it has been proved by microscopical examination, as well as by clinical results, that milk from tubercular cows contains the tubercle bacilli, and this, even when the udders and teats are healthy; but the literature of the subject, so far as I have been able to discover, no where does more than suggest the possibility that milk, from a tuberculous woman, may infect her offspring. It is to be hoped that more such definite reports as the above may be made. Certainly, the question is of the most vital consequence to infants nursed at the breast. W. F. C.]

Castration for Masturbation.—DR. PILCHER, superintendent of the institution for imbeciles and weak-minded children at Winfield, Kansas, has been bitterly denounced by newspapers in Winfield and Topeka, for castrating several boys—inmates—who are confirmed masturbators. His predecessor had treated these boys five years without benefit, and Dr. Pilcher, taking a rational view of the subject, performed the operation for the same reason he would perform any other surgical operation—for its curative effect. There is a strong probability, that he will be indicted for mayhem.—*Texas Medical Journal.* [Ovariotomy in young women for persistent masturbation, or nymphomania, as it is more euphoniously called in their case, has been recommended as a last resort, by good authorities. I recall an ovariotomy performed in San Francisco for that reason alone, after other measures had failed. If young women are to be deprived of their ovaries for this vice, why not boys of their testicles?—W. F. C.]

SURGERY AND ANATOMY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital Sacramento, Cal.,

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Relative Merits of Catgut and Silk in Surgery.—DR. C. T. WETHERSPOON says: Silk is stronger than catgut, and may be found in smaller sizes. Catgut is a stiff, elastic, and fat-holding material. Its preparation consists in the removal of the fat and in thorough sterilization of its meshes. From its very source, however, it comes into the world septic. It is described as the submucosa of the sheep's intestine, although in reality it is the whole gut, minus the outer layer. The gut is put into water for awhile, and then its outer coat removed with a dull knife. Following this it is placed in an alkali solution for some hours, then removed, stretched into required thicknesses, and dried. It is then sterilized by juniper oil or alcohol. As prepared surgically, it is stiff, inconvenient, and hard to thread, making it hazardous to pull through thin tissues, and necessitating much handling. It produces uneven pressure, is apt to stretch after becoming softened, and cannot be tied in a secure knot. It is a proteid substance and consequently offers a nidus for development of bacteria. About the only advantage of catgut is, that it is readily absorbed. On the other hand, silk is soft, pliable, and non-irritating. It is easily sterilized, requires little handling, makes a small knot, and does not relax in the tissues. When buried it becomes encysted and may remain for months, though eventually removed by absorption.—*St. Louis Medical and Surgical Journal*, November, 1894.

Complications of Bones and Joints in Typhoid Fever.—DR. CARL BECK finds that many obscure bone and joint troubles may be traced to typhoid fever as a cause. Quincke, Ebermier, Klemm, and others, have proved that the bacillus typhosus is able to produce changes in bone tissue as well as in the alimentary canal. In 8 cases out of 10, Quincke found in the medullary substance of ribs from patients who died from typhoid fever, the bacillus typhosus. The medullary substance, he thinks, has the same physiological function as the spleen, and both are affected the same way. In all these 8 cases, no disease of bones had manifested itself during lifetime, and it may be concluded, from these facts and others, that the bones, in the disease of typhoid fever, are usually affected. The precipitation of the bacillus in the bone substance is partly due to the slower circulation within the same. These complications are, however, rare, for Fuesbinger found bone complications only 5 times among 1,600 cases. Keen has found a much larger proportion of bone troubles traceable to typhoid. In the joint complications the conditions may be those of simple edema of the capsule with infection of the blood vessels, or in a higher degree softening and swelling of the cartilages and ligaments, with lardaceous degeneration of these tissues, or finally, fibrinous, hemorrhagic, or pus exudate into the joint, followed by destruction of the parts. In the treatment, the following fact is of interest. The researches of Fentlerer and Chiari found the interesting fact that the typhoid bacillus is transported from the alimentary tract to different parts of the body; therefore the canal should receive the most scrupulous disinfection, and every ulcer of the mouth, pharynx, or larynx, should receive careful treatment.—*Chicago Medical Record*, November, 1894.

Operation for Removing the Tongue.—MR. EDWARD COTTERELL states that it may be taken as an established fact that to prevent early recurrence of cancer, it is best to remove thoroughly the lymphatic glands next to the disease. Even where the glands are not apparently enlarged, he makes a practice of cleaning out each submaxillary space and ligaturing the lingual arteries before removing the tongue. He has very frequently found the glands diseased, although no enlargement was detected before the operation. The space is opened by making an incision similar to that employed in ligaturing the lingual artery underneath the hyoglossus, but extending a little further backward. The facial artery is tied just before it enters the submaxillary gland and when it emerges from it. The submaxillary glands themselves are removed, along with the lymphatics, which does away with the dribbling of saliva, so distressing to the patient, and insures the thorough cleaning away of all the lymphatics. Where the floor of the mouth is extensively involved, he recommends Kocher's operation.—*Lancet*, November 3, 1894.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

Acoustic Exercise for Deaf Mutes.—DR. URBANTSCHITSCH describes how it is possible to attain good results by acoustic exercise even in deaf mutes, that have been heretofore considered beyond hope. Methodical acoustic instruction may teach them. (1) How to separate and interpret acoustic impressions. (2) How to excite their acoustic activity, by which a gradual increase of perceptibility is rendered possible. The author orders daily acoustic exercise of half an hour's duration, later on of at least 1 hour, if possible, without hearing tubes. The sound transmitted to the ear ought to be only of an intensity that is absolutely necessary for the production of the corresponding acoustic excitation. *Wiener klin. Wochenschr.—Archives of Otology*, October 15, 1894.

The Symptomatology of Rhinitis Chronica Atrophica, with Special Reference to the Affections of the Ears.—DR. J. MORF, in reviewing the opinion of various writers upon the relation that exists between atrophic, chronic rhinitis and ear diseases, finds a great diversity of views. He therefore undertook to decide the point from clinical investigation. Of 80 patients, he found 35 per ceut. males and 65 females, their ages varied from 10 to 60 years, a large majority being from 10 to 30. The young are most susceptible to the disease. The frequency rapidly decreases in those over 30. The most formidable symptom in 72 of the 80 was the odor, in most cases recognizable at a distance. Atrophy is the most marked change, and is often so excessive, that the turbinated bodies are scarcely visible. The sense of smell was reduced in 47 cases out of 80; about one-half of the patients complained of headache. Pharyngitis sicca is a constant associate of atrophic rhinitis. Deviation of the septum was seen 7 times, eczema of the nostrils 4 times, disease of the lachrymal canal twice, and opacities of the cornea twice. Among the complications of rhinitis diseases of the ear occupy a very important position. The ears were found affected in 55 per cent. of the cases at the clinic. The author concludes as follows: Chronic atrophic nasal catarrh attacks chiefly young people. Women are more often affected than men. Fetor is present in 90 per cent. of the cases. Unilateral disease is rare. Where the middle turbinates are hypertrophied, or covered with mucous polypi, the case is complicated with suppuration of the accessory nasal cavities. The naso-pharyngeal mucosa is often affected, and that of the larynx and trachea much more rarely. The eyes are rarely affected. Disease of the inner and middle ear are frequent complications. The middle ear is four times oftener affected than the inner ear. Pathological alterations in the tympanic membrane without deafness are rare. In about one-half the cases of aural complications, both ears are attacked, and in another half only one ear. In the latter circumstance the corresponding half of the nose is more diseased than the other. Nervous deafness is relatively more common in atrophic rhinitis, despite the fact that most of the patients are relatively young. The middle ear disease is generally the consequence of disturbed tubal ventilation, and the affection of the inner ear must be referred to constitutional anomalies.—*Archives of Otology*, October, 1894.

The Treatment of Paralysis of the Accommodation with Antitoxin.—DR. H. SCHMIDT-RIMPLER reports three cases of paralysis of the accommodation, two of which were of undoubted diphtheritic origin and the other probably of the same nature that he treated by injections of antitoxin. The injection of a vial of antitoxin produced no constitutional symptoms. The author does not express an opinion as to whether the remedy had acted beneficially or not, but states that the 3 cases of undoubted diphtheritic trouble recovered much more promptly than was usual under previous methods of treatment. The effect upon the improvement in the children's speech was marked. It is worthy of further trial. The author would also try the injections in cases of conjunctival diphtheria, particularly in the milder cases, which resemble croupous blenorrhea.—*Centralblatt f. Pract. Augenheilkunde*, December, 1894.

Papillary Conjunctivitis.—DR. ADOLPH BRONNER, at the Ophthalmological Society of the United Kingdom, read notes of a case of papillary conjunctivitis of the left eye, which he attributed to the prolonged internal use of arsenic. The patient, a youth of 22, suffered from chronic eczema. In July he began taking arsenic in 1 milligramme doses. For 2 months he took 24 pilules daily, when the eyes became red and irritable. There was a peculiar slight edematous condition of the conjunctiva and of the lids. Boric acid lotion and cocaine drops relieved the condition for a time. After two weeks the patient called again with small, pinkish, hard, irregular papillary growths of the conjunctiva of the left upper lid, most marked at the upper end of the tarsus. In spite of the local application of sulphate of copper, the growth did not seem to diminish for 14 days. The arsenic was then discontinued and, under treatment, the growths became much better. The use of arsenic frequently gives rise to conjunctivitis, but there were no cases on record in which papillary growths had formed.—*British Medical Journal*, December, 1894.

Five Cases of Plastic Cellulitis of the Orbit.—At the meeting of the Ophthalmological Society of the United Kingdom, MR. GEORGE LAWSON read a paper on cases of plastic orbital cellulitis. In 4 of the cases there was no pus, in 1 a little pus formed at the end of the case, and escaped through one of the exploratory incisions, which had been made into the orbit. Three of the 5 patients died, 1 had to have the eye removed, and 1 recovered with impaired vision. The symptoms were pain in the orbit, edema of the lids, and proptosis coming on shortly after the first symptoms, with increasing impairment of sight. Temperature from 101° to 107° F. The symptoms rapidly increased in severity, the eyelids became purplish red, shining and edematous; the upper lid was tightly stretched over the protruding globe. There was pain in the orbit, varying in intensity and restlessness. If the symptoms were not relieved by treatment, the patient became delirious, then comatose and died. In neither of the cases had the patient received any injury, nor was there any history of syphilis. In 4 cases the cellulitis was confined to 1 orbit, in 1 both orbits were affected. Four of the patients were women, and 1 was a young man. The author thought the cases originated from septicemia, but in 3 cases he was unable to discover the source of the septic matter. In 1 case the orbital trouble followed acute tonsilitis. Another was suffering from pyemia before the double cellulitis came on. The author thought the vagino-uterine tract was a frequent source of infection, and accounted for the more common occurrence of the trouble in females.—*British Medical Journal*, December 22, 1894.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. SIMMONS, JR.. M.D., Sacramento, Cal.

Transmission in Animals of Human Cancer.—(*Compt. Rend. de la Soc. de Biol.* June 9, 1894.) In the case of 40 rats, in whose peritoneal cavities cancer particles were transplanted, in only 1 case did the cancerous mass grow and undergo metastatic change. Subcutaneous inoculations in 15 cases were without result. In 1 case, after subcutaneous and subpleural injection of the fluid of a lymph sarcoma, of the testicles, the implanted spot became a typical lymph node.—*Centralblatt f. Innere Medicin*, October 27, 1894.

Double Suppurative Orchitis, Acute Peritonitis and Death.—This was a noteworthy case on account of the obscure etiology. Without injury, without a previous gonorrhea, without mumps or any preceding infection in a 22-year-old soldier, who was perfectly sound except for a chronic ear discharge, there occurred a double epididymitis, with pus formation. Orchitis also came on, and by extension of inflammation along the cords, peritonitis resulted, causing death in five days. At the autopsy the testicles were found in a mass of matter, in which the connective tissue floated. It is to be noted that at the same time several cases of epidemic mumps appeared in the same garrison.—*Archiv. de Méd. et de Pharm. Militairies—Centralblat f Chirurgie*, No. 46, 1894.

Lipoma of the Spermatic Cord.—A patient through a fall upon the testicles was incapacitated nine months from work. At the end of this time he observed a swelling of the scrotum. This increased until, at the end of thirteen years, it had reached a circumference of 76 cm. and the patient, who was 64 years of age, could no longer work. A diagnosis of sarcoma was made. An operation showed a purely fatty swelling, with colloid degeneration. The spermatic cord was also affected, and though its whole course was thickened with the fatty tissue, extirpation was followed by perfect recovery.—*Bull. et Mem. de la Soc. de Chir. de Paris—Centralblatt f. Chirurgie*, November 17, 1894.

Is There a Gonorrheal Rheumatism?—J. A. GLASER asserts (*Jahrbücher der Hamburg Staats Krankenanstalten*) in an examination of 380 cases of polyarticular rheumatism associated with stricture or gleet that there is no essential difference in fever, pain or the number of joints affected, over what we might expect in uncomplicated cases. He comes to the conclusion that a gonorrheal rheumatism, dependent for its cause on gonorrhea alone, does not exist. He mentions that the presence of gonococci in the affected joints signifies nothing, as it thrives only on mucous membranes.—*Centralblatt f. Innere Medicin*, No. 43, 1894.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

Bromoform in Whooping-cough.—DR. A. B. CARPENTER, of Philadelphia, has used bromoform in several cases of whooping-cough with good result, but in others it seemed to have little effect. He says that the good effect of the drug is due, in part at least, to its influence as a local anesthetic upon the pharyngo-laryngeal mucous membrane. The violence of the paroxysms is moderated, the frequency of the cough is diminished, vomiting is frequently stopped in 24 hours, and in many cases the duration of the disease is shortened. The remedy is given in 1 to 5-drop doses, 3 or 4 times daily, on sugar, or thoroughly mixed with water, or in the following formula:

Bromoform	m lvii
Alcohol	ʒ iv
Tinct. Card. Co.	*ad* ℥ iii—M.

S.—One teaspoonful in water 3 times a day.

The symptoms of poisoning, which have been noticed only after large doses, are pallor, staggering, dilatation of the pupil, coma, heart failure, and collapse.—*British Medical Journal.*

Apocynum Cannabinum.—This drug has been known and used in America for some years, as an emetic, cathartic, and remedy against dropsy. In 1883, SCHMEIDEBERG found it to contain an amorphous substance, apocynin, and a glucoside, apocyneine, the first soluble in alcohol not in water, the second readily soluble in water. The physiological action of a 10 per cent. tincture has been investigated independently by BRADFORD and MURRAY, and they considered its effects as somewhat similar to those of strophanthus. The latter found that it reduced the frequency of the rapid heart, strengthened the systole, relieved cyanosis, and acted as a good diuretic. PETTERUTI and SOMMA have used the root in two forms: a decoction with water and a tincture. The decoction had a strength of 1–3:150; the tincture, 1:10. Clinical experiment showed that the decoction readily influenced the alimentary tract, producing catharsis and emesis, while if these effects were delayed, there would be increased diuresis with acceleration and strengthening of the heart beat. The tincture, on the other hand, was found to be free from gastro-intestinal irritant effects, even when large doses were employed. These distinctions, therefore, would indicate that the gastro-intestinal effects are due to some substance soluble in boiling water, but insoluble in alcohol. Marked cardio-kinetic effects were obtained from the tincture when employed in doses of from 60 to 90 minims daily. It is probable, therefore, that the effects of the decoction are due to the presence of apocyneine, those of the tincture to that of apocynin. A marked effect of the tincture is the production of diuresis, which is never accompanied by albuminuria; in fact, when albumin has been present, it has disappeared after a course of the tincture, and therefore we conclude that apocynum acts as a diuretic without irritating the renal epithelium, but by virtue of its action upon the circulation. There is, at the same time, an increase in the force of the pulse, and frequently a diminution in its rapidity, but the change in frequency is not a constant effect. Finally, apocynum frequently increases arterial tension. On the whole, therefore, the tincture of apocynum is likely to prove useful in cases of imperfect compensation of valvular lesions, either reducing or completely removing edema and dyspnea, which are the indications of such a condition.—*British Medical Journal.*

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

A New Method of Staining Connective Tissue.—LUBARCH has observed that in Weigert's method for staining fibrin, several other constituents become stained at the same time. He describes a modification by means of which, connective tissues of whatever kind can be stained. The fibrous meshwork of sclerosed tissue is brought out in a characteristic manner. The staining solution is made up of anilin water and gentian violet, the differentiating (decolorizing) fluid, a mixture of anilin oil and xylol (2 to 1), and of these 2 ingredients, the anilin oil alone is directly operative, the xylol merely acting as a controlling agent, having no decolorizing power. An increase in the proportion of xylol, weakens the action of the anilin xylol. The method is as follows: Portions of tissues fixed in alcohol are cut in paraffin, sections placed upon the slide and stained with anilin gentian violet (10 parts of anilin oil shaken into a fine emulsion with 100 parts of water and filtered, add to the filtrate 5 to 10 parts of a concentrated gentian violet alcoholic solution) for 10 to 20 minutes. Next treat for 1 minute with Lugol's solution of a port wine tint, dry with filter paper, and decolorize with anilin xylol (anilin oil, 2 parts; xylol, 3 parts). Only experience will determine the moment at which to stop further decolorization, by the action of xylol. Mount in xylol balsam. The connective tissue fibers will be stained various shades of violet.—*Centralblatt f. allg. Pathologie.*

Safranin Reaction in Sputum.—This test, suggested by ZENONI, depends upon the fact, that mucin is colored yellow by safranin, and albumin is stained red. In the sputa of bronchitis, mucin, while in that of pneumonia, albumin predominates. The method of conducting the test is as follows: The sputum is spread out in a thin layer on a cover glass; then put in absolute alcohol where it remains for a quarter of an hour. It is then removed and stained in a half saturated watery solution of safranin. When the cover glass is removed, it is partially dried and then placed on a white ground and examined. If it is stained yellow, mucus predominates, and the case may be assumed to be bronchitis; whereas if a red color appears, albumin was the chief constituent, and pneumonia was probably the condition present.—*Albany Medical Annals*, October, 1894.

The Symptoms and Treatment of Tape Worms.—In a clinical lecture at the Hôpital de la Charité, PROF. POTAIN refers to the manifold symptoms occasioned by teniæ. Digestive troubles are frequent and salivation is particularly common. Vomiting, nausea, colic, constipation, and diarrhea are common manifestations. Constriction of the throat is also a symptom. Bulimia is less common than is usually supposed. He has noted veritable cases of asthma that disappeared after expulsion of a tape worm. The circulatory apparatus may be involved. Palpitations of the heart, irregularity and even dilatation of the right ventricle have been noted. In the case of an officer, angina pectoris was caused by a tenia. Anesthesias, analgesias, and formications are not infrequent; at other times peri-anal irritation, together with generalized prurigo occur. Vertigo is frequent, but not continuous. Legendre has published the case of an individual who suffered from violent attacks of vertigo and syncope, which disappeared after the expulsion of a tenia 7 meters in length. In 1876, Mesnet published the case of a man who began to have attacks of epilepsy at the age of 44 years; the attacks ceased after the expulsion of a tape worm. Paralysis and mental disturbances also develop from the presence of a tenia. The diagnosis of helminthiasis from the subjective symptoms is often difficult because the symptoms are so varied. A positive diagnosis is only possible after a careful examination of the feces for eggs and proglottides. In the treatment, many indigenous and exotic remedies have been recommended, but very few are really serviceable.—*Union Médicale*, September 13, 1894. [He is the most accomplished diagnostician, who treats subjective symptoms only in the light of corroborative evidence. A diagnosis thus consummated, postulates a thorough objective examination. Just as rapidly as functional affections are being eliminated from our nosology, so will many diseases, which are merely terms for a group of symptoms unified for the convenience of the practitioner. Helminthiasis may be cited as just such an affection. Its varied clinical picture may suit the oculist, neurologist, gynecologist, or surgeon alike. The administration of an anthelmintic should be regarded as an objective method of examination as well as a curative agent. Many so-called diseases will be excluded by this means. In the expulsion of teniæ, the preparation of the alimentary canal is equally as important as the administration of the anthelmintic. I have found the following to be one of the most serviceable formulæ for tape worm:

℞.	Granati corticis radicis	℥ss
	Semini piponis	℥i
	Extracti filicis maris eth.	ʒi
	Pulv. ergotæ	ʒi
	Pulv. acaciæ	ʒii
	Olei tiglii	m ii—M.

This is to be taken at one dose, having eaten no breakfast and having taken a full dose of Rochelle salts the previous night.—A. A.]

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M.D., Assistant Physician, State Asylum for Insane,
Stockton, Cal.

Insanity and Syphilis.—PROF. P. J. KOWALEWSKI, of Charkow, has published a paper upon this subject reviewing the literature to date, and then gives his own ideas based upon very extensive clinical observations made in the course of a number of years. He first speaks of syphilitic melancholia, which is met with as simple or hypochondriacal melancholia, the latter especially in the form of syphilophobia, both forms present a more or less pronounced mental dulness. Mania in syphilis is very seldom seen. Kowalewski explains this as due to the fact that all syphilitic diseases of the mind present, generally speaking, the character of an enfeebleness of brain force, for which reason the maniacal condition of the syphilitics have more the characteristics of confusion and amentia than of real mania. Paranoia is for the same reason not often met with in syphilis, and when it does occur we find that the disease lacks the regular, logical, and systematic arrangement of ideas, though persecutory or hypochondriacal symptoms are generally observed. The symptoms of amentia are of much more frequent occurrence in syphilis. That this form of syphilitic psychosis has been given so little attention in the literature is due to the fact that it is only recently that amentia has been introduced into medical science. The by far most frequent form of insanity in syphilis is dementia—primary as well as secondary. Syphilis furthermore plays a much more important role in the development of idiocy than has hitherto been assumed. As regards general paralysis, it is the opinion and has been the experience of Kowalewski that syphilis is a very important factor in the development of dementia paralytica, but never the only one. It cannot be doubted that cases are frequently met with in which the most careful research and examination fails to discover the least traces of an hereditary or acquired syphilis. Even in cases in which the general paralysis is of syphilitic origin, syphilis is not the only cause of the disease; one always finds other predisposing causes, such as hereditary predisposition to neuroses, a peculiar character or temperament (diathesis), mental overexertion, fatigue, abuse of alcohol, etc. Kowalewski divides all cases of general paralysis in their relation to syphilis into four classes: (1) Cases in which there is no trace of syphilis. (2) Cases of general paralysis in which during life syphilis was not suspected, but in which after death the autopsy proved the presence, beyond a doubt, of brain syphilis. (3) Cases of paralysis in which there was a history of syphilitic infection, but in which the disease appeared to have been brought about by other causes. (4) Cases of paralysis caused by syphilis. The subdivision of general paralysis into syphilitic and non-syphilitic is regarded by Kowalewski as unnecessary. This, however, does not give a physician a right to forget that in a large majority of cases (60 to 85 per cent.) the paralysis has its origin in syphilis. Since the writer had his attention especially directed to the relationship of syphilis to general paralysis, he has had under his observation 145 cases of this disease, in 124 of which an ulcus durum was found to have been present; in 98 cases there had been symptoms of secondary syphilis. In accordance with the clinical picture he divides all cases of general paralysis into three groups: the acute, and the chronic general paralysis, and dementia paralytica, though he recognizes the subdivision of Fürstner as being better—that of paralysis progressiva, typica and atypica.—*Archiv. Psychiatries—Allg. Zeitschrift f. Psychiatrie*, Vol. I, No. 6.

Concerning the Responsibility of the Epileptic.—DR. VALLON reports an interesting case, in which the responsibility of a criminal suffering from epilepsy was questioned in court. The father of the prisoner was addicted to liquor, and committed suicide; the mother and grandmother had suffered from epilepsy. The prisoner was 28 years old, short, but well-built, and had had epileptic attacks since he was 11 years old. In 1885 he had been sent to jail for vagrancy; in 1889 he was found guilty of larceny; soon afterward he was again convicted of larceny and sent to prison for 5 years. While here he frequently had attacks of epilepsy. Soon after he was released from prison, he committed a burglary and was caught at it. He succeeded in making his escape, but was rearrested, and at this time confessed the crime. A few days afterward he tried to commit suicide, but the attempt was probably only pretended. A month afterward he had an epileptic attack, with a delirium of short duration, and as this attack was repeated from time to time, lasting as long as 48 hours, he was sent to an insane asylum. He was afterward found to have no recollection of what happened during two of the delirious attacks. During the free intervals he was lucid, but irritable, stubborn and bashful. During the early part of his confinement in the asylum, he repeatedly made an open confession of his crime, but afterward he pretended not to know anything about the burglary. About 6 weeks after his admission to the asylum, he made an attempt to escape. In the written opinion of the case, which the writer presented to the court, he testified that the prisoner was an epileptic, but that at the time he committed the burglary he was not delirious, and was, in fact, not affected by the disease from which he was suffering, as he himself admitted. During the trial, the prisoner at first claimed not to recollect anything about the crime, but finally confessed all, and was sentenced to 5 years in the penitentiary.—*Annales d'Hygiene Publique—Allg. Zeitschr. d. Psychiatrie.*

FORMULÆ.

Psoriasis.

Amonii carbonatis	gr. iv
Potassii acetatis	gr. xxv
Liquor. arsenicalis	m iv
Syrupi aurantii floris	ʒ ii
Aq. menthæ piperitæ	*ad* ℥ ss

Misci et fit mistura.

S.—A tablespoonful in half a wineglass of water 3 times daily after meals. *Practitioner.*

Hemoptysis.—BLOSCHKO gives:

Gallic acid	
Ergotin	āā 1 part
Distilled water	
Syrup of althea	āā 25 parts

S.—Teaspoonful every 2 hours.

Night Sweats of Phthisis.—SZÉKELY claims that a mixture of belladonna and arsenious acid is more efficient than atropine.

Fowler's solution	
Tr. belladonna	āā gtts xlv
Cherry laurel water	ʒ v

S.—Fifteen or 20 drops at night repeated later during the night.—*Medical and Surgical Reporter.*

Hemorrhoids.—TUTTLE advises:

(1) *Astringent ointment:*

Ung. belladonna	
Ung. stramon	
Ung. ac tannic	āā ʒ i

(2) *Injection for internal piles:*

Ac. carbolici	ʒ iss
Ac. salicyl	ʒ ss
Sodii bibor	ʒ i
Glycerine	*ad* ℥ i

S.—Inject not more than 4 drops and exercise care as to antisepsis. *Mathews' Medical Quarterly.*

Gonorrhea.—MARTIN uses:

Balsam copaiba.........
Oil sandal-wood .....āā m v
Oil cinnamon...........m i

In capsule. Give 6 to 12 daily, administering them after meals.—*Medical and Surgical Reporter.*

Tonic.—DOUGLAS prescribes:

Ferri et quininæ citratis . ʒ ii
Tr. nucis vomicæ. ..... ʒ ii
Acidi phosphorici diluti .. ℥ ss
Syrupi hypophos *q. s. ad* . ℥ iii

S.—One tablespoonful before meals. *Post-Graduate.*

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for December, 1894.—The deaths registered in 77 town districts of the State, during the month of December, in a population of 791,223, correspond to an annual rate of 16.08 a thousand, the total mortality having been 1,061. 95 deaths were due to zymotic diseases, giving an annual rate of 1.44 a thousand. Of these, 18 were due to diphtheria, 12 to cholera infantum, 36 to typhoid fever, 5 to diarrhea and dysentery, 5 to cerebro-spinal fever, 2 to whooping cough, 11 to croup, 3 to intermittent and remittent fevers, 1 to scarlet fever, 2 to measles, and 0 to small-pox. 336 deaths resulted from diseases of the respiratory organs, giving an annual rate of 5.04 a thousand. Of these, 180 were due to consumption, 110 to pneumonia, 32 to bronchitis, and 14 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.64 and 1.56, respectively. 70 deaths resulted from diseases of the heart, 10 from alcoholism, 0 from erysipelas, 39 from cancer, and 444 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 587,000, was 16.92 The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from Fresno.

METEOROLOGY.

Summary for December.—*Temperature.*—The normal temperature of the State for December is 52.9°; the average for November, 1894, was 47.2°, a departure from normal of -5.7°. The highest monthly mean was 59.4°, at Volcano Springs, in the desert regions of San Diego county; the lowest, 27°, at Cedarville, Modoc county, and Greenville, Plumas county, in the mountain regions of the State. The maximum temperature was 80°, on the 3d, at Florence, Los Angeles county; the minimum, 6° below zero at Greenville, in the mountain regions of Plumas county. The greatest monthly range was 49°, at Yreka, Siskiyou county; the least, 18°, at Point Lobos, San Francisco county. The absolute monthly range for the State was 86°.

Rainfall.—The normal precipitation for the State for December is 4.42 inches; the average for December, 1894, was 9.92 inches, a departure from the normal of +5.00 of an inch. The greatest monthly precipitation was 38.41 inches, at Fordyce Dam, in the mountain regions of Nevada county; the least, 1.05, Keeler, Indio county.

Wind.—The prevailing direction of wind was south.

Unusual Features.—The unusual meteorological feature of the month was the excessive precipitation and unusually low mean temperature.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for December, 1894.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No. of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn ....Cal.	51.3	72	33 0	------	------	------	----	13.56	------	----	----	----	S.E.	Southern Pacific Company.
Berkeley......... "	48.0	57	37.0	52.0	44.0	8.0	----	12.63	84 0	5	8	18	S.E.	Obs. University of California.
Colfax............ "	41.5	65	30.0	------	------	------	----	24 08	------	----	----	----	S.E.	Southern Pacific Company.
Eureka........... "	46.0	60	30.0	52.0	40.0	12.0	25	12.31	88.0	5	8	18	S.E.	Weather Bureau Dept. Agr.
Fresno........... "	47.6	63	31.0	55.0	40.0	15.0	15	4.09	75.0	4	9	18	S.E.	" " "
Independence.. "	38.0	57	22.0	46.0	31.0	15.0	----	1.89	58.0	7	15	9	N.W.	" " "
Los Angeles.... "	54.0	75	39.0	62.0	46.0	16.0	10	4.62	77.0	9	8	14	E.	" " "
Monterey .... "	51 9	64	34.0	------	------	------	----	5.87	------	----	----	----	S.	Southern Pacific Company.
Napa........... .. "	50.0	61	37.0	55.0	45.0	10.0	----	9.37	83.0	4	6	21	S.	Station Napa Insane Asylum.
Oakland......... "	49.0	60	39.0	53.0	44.0	9.0	----	11.78	87.0	5	11	15	S.E.	Chabot Observatory.
Paso Robles.... "	46.0	64	24.0	55.0	38.0	17.0	----	6.14	75.0	3	8	20	S.	Southern Pacific Company.
Red Bluff....... "	45.0	62	32.0	50 0	40.0	10.0	22	11.01	87.0	5	5	21	N.W.	Weather Bureau Dept. Agr.
Sacramento. ... "	46.9	58	30.0	52.0	42.0	10.0	20	8 86	86.0	3	9	19	N.	" " "
San Bernardino "	50.0	70	30 0	58.0	41.0	17.0	----	7.25	77.0	9	12	10	W.	A. K. Johnson, M. D
San Diego....... "	55.0	70	41 0	69.0	50.0	19.0	14	2.26	78.0	10	4	17	N.E.	Weather Bureau Dept. Agr.
San Francisco.. "	49 7	61	40.0	53.0	46.0	7.0	22	9.01	82 0	3	9	19	S.E.	" " "
Santa Barbara.. "	54.1	69	42.0	61.0	47.0	14.0	8	4.67	74.0	11	5	15	W.	Hugh D. Vail.
Santa Cruz...... "	54.0	70	35.0	62.0	46.0	16.0	----	13.71	------	8	0	23	S.E.	W. R. Springer.
Yuma...........A. T.	54.8	72	37.0	65.0	45.0	20.0	6	0.40	63.0	12	8	11	N.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: FEBRUARY, 1895.

THE THIRTY-FIRST SESSION OF THE LEGISLATURE

NO. 1.

The thirty-first session of the Legislature commenced on January 7, 1895. The number of bills introduced so far is well up to the figures of any previous year; the proposed enactments already numbering close to one thousand. The profession has, at this session, a rather larger representation than usual. In the Senate there are DR. A. J. PEDLAR, of Fresno, and DR. N. MARTIN, of Dutch Flat. In the Assembly are DR. C. J. CARGILL, of San Juan, and DR. J. H. GLASS, of Paso Robles. The following bills are of interest to the profession:

Taking first the bills relating to State institutions, we find the following: Assembly Bill 181 amends the act providing for the erection and management of the Southern California Asylum by reducing the salary of the Secretary of the Board of Trustees from $1,200 to $300 per annum. Assembly Bill 186 appropriates $5,400 for the erection and furnishing of a residence for the Medical Director. Assembly Bill 187 appropriates $275,000 for additional buildings and improvements. Of this amount, $100,000 is to be expended on an administration building and $88,000 on a female ward. Assembly Bill 188 (S. B. 428 and 429) appropriates $25,000 for maintenance for the forty-sixth fiscal year, and $10,000 for furnishing a new ward. Assembly Bill 201 appropriates $808, being the balance due on the construction of a refrigerator. Assembly Bill 332 (S. B. 308) authorizes the Trustees of the Asylum to convey certain water rights to the North Fork Water Company in exchange for shares of the capital stock of said corporation. Assembly Bill 551 appropriates $5,000 to pay the claim of George Miller for damage done by storm water and sewage from the Asylum. The Mendocino Asylum is also interested in a number of measures. Assembly Bill 227 appropriates $159,280 for the erection of an administration building, to furnish wards for 206 patients, to construct an electric light plant, improve the grounds, purchase live stock, increase the water supply and to construct a sewerage and drainage system, with other items. Of this amount, $100,000 shall be paid for the erection of an administration building. Assembly Bill 228 appropriates $45,000 for deficiency of the appropriation for the support of the Asylum in the forty-fifth and forty-sixth fiscal years. Assembly Bill 230 appropriates the money remaining in the special Mendocino Asylum fund for the use of the Directors of said Asylum. The actual amount available is $15,728.-73. Assembly Bill 231 amends those sections of the original act relating to the Medical Superintendent and the Assistant Physician. The salary of the Superintendent is increased from $3,000 to $3,500. The salary of the Assistant Physician is also increased from $2,000 to $2,500 per annum, and the Board of Trustees is empowered, if necessary, to appoint an additional Assistant Physician, whose salary shall not exceed $2,500. Senate Bill 404 (A. B. 444) authorizes the Trustees to purchase additional lands for the use of the Asylum; the sum of $15,000 being appropriated for the purpose. The land is to be used for agricultural purposes. Assembly Bill 375 (S. B. 365) appropriates $15,000 for repairs, reflooring, etc. in the old building of the male department of the Stockton Asylum. Assembly Bill 376 (S. B. 366) appropriates $15,013.09 to provide for the deficiency of the appropriation for the support of the Asylum for the forty-fourth and forty-fifth fiscal years. Assembly Bill 239 amends Section 1 of an act, amending Section 8 of the Act of 1876, "providing for the future management of the Napa Asylum." It reduces the number of assistant physicians to two instead of three; also removing the distinction of first and second assistant physicians, which had been in force. The salary of the third assistant physician, whose position it is proposed to abolish, is $3,000 per annum. Assembly Bill 257 appropriates $1,516.59 to pay the claim of George J. Mothersole, for labor in connection with the Asylum.

Assembly Bill 360 (S. B. 449) appropriates $129,150 for the improvement of the Whittier State School. These improvements are numerous, including trades' building and equipments, a cannery, the purchase of additional land, with water and piping, as well as new buildings. The sum of $40,000 is specified for the erection of two cottages, in which to accommodate fifty boys, from which it would appear that this deserving institution is making a new departure, and in the right direction, where further room is required.

Senate Bill 448 appropriates $2,375, the architect's fees in connection with the power and electric plant at the School. Senate Bill 503 appropriates $3,470.41 to pay the city of San Francisco for expenses incurred in conveying children to Whittier. Senate Bill 462 has been introduced to prevent evil-disposed persons from coming upon the grounds of the Whittier State School. No person must leave any kind of weapon or explosive upon the premises, nor must he furnish or deposit in that locality whiskey, cigars, cigarettes, tobacco, etc. All convicts are forbidden to come upon the grounds or to communicate in any way with any inmate. Tramps, vagrants, and all associates of thieves, are similarly prohibited, and no letters or literature of any kind may reach the pupils without first being examined by the Superintendent. Senate Bill 473 (A. B. 480) appropriates $46,500 for a laundry, boiler and power building at the Home for Care and Training of Feeble-minded Children, at Glen Ellen. Assembly Bill 465 appropriates $5,000 for making repairs and for improvement at the Agnews Asylum.

Assembly Bill 414 (S. B. 419) amends the Pharmacy Act of 1891. It introduces in Sec. 3 the words: "or such other persons as can furnish evidence of having seven years' practical experience in compounding and dispensing the prescriptions of medical practitioners in this State immediately prior to the passage of the Act of 1891." These persons are to be regarded as "practising pharmacists." Section 4 is amended by extending the limit for complying with its requirements from January 1, 1892, to January 1, 1896. Assembly Bill 534 also amends the Pharmacy Act by providing that persons who shall have had seven years' experience in this State, where prescriptions are compounded, and who shall have been registered assistant pharmacists for four years under the Act, shall, upon satisfactory proof, be entitled to certificates as registered pharmacists. Section 5 is also amended by striking out the clause requiring an assistant pharmacist to pass an examination as a licentiate in pharmacy before conducting a drug store. He is now prohibited from engaging in business only "until he shall have obtained a certificate as a registered pharmacist, as required by this Act."

Assembly Bill 387 amends Section 308 of the Penal Code relating to the sale or furnishing of tobacco to persons under sixteen years, by making it a misdemeanor to possess or manufacture, or to give or deliver to any person, without reference to age, any cigarette in any form or kind. The penalty is raised from $100 to $300, and a period of imprisonment is added. The penalty is also raised and a period of imprisonment added for any person furnishing tobacco in any form to a minor under eighteen years of age. A clause is also added whereby the minor who uses tobacco in any form is guilty of a misdemeanor, and punishable by fine and imprisonment. Senate Bill 459 amends the same section by adding the words "possession, making, manufacturing, or importing," and also raises the age from sixteen to eighteen years.

Senate Bill 313 (A. B. 367) provides, in counties of the first class, for the appointment, by the Coroner, of a competent physician for the performance of autopsies where inquests are held. This physician shall receive a salary of $2,400 per annum. The only county that this would affect at present is San Francisco. Assembly Bill 474 (S. B. 516) prohibits the burial of the dead within the corporate limits of any incorporated city of over one hundred thousand inhabitants after the 1st day of January, 1900. This at present would only relate to San Francisco, but Los Angeles, and even Oakland, might be concerned in the workings of the Act by that date. Assembly Bill 467 amends the Act of 1893 providing for the removal of human remains from cemeteries in cities having a population of more than 5,000 and not exceeding 100,000, by making the minimum of population 1,500. Senate Bill 195 provides for the removal of human remains from cemeteries in cities having a population of less than 5,000 and more than 1,500. As these bills appear to be similar in intention, they can, no doubt, be consolidated before final action is taken.

Assembly Bill 270 provides an official stenographer for the Coroner in cities of 100,000 or more inhabitants. His compensation is fixed at $150 a month, and ten cents per folio for transcribing. This applies only to San Francisco. Assembly Bill 487 prohibits the selling or giving away of liquor within one mile of any State Prison or University. Upon a written complaint of any citizen it shall be the duty of the Attorney-General or the District Attorney to take proceedings under this Act. Assembly Bill 180 (S. B. 307) abolishes the office of Attorney for the State Board of Health and the Board of Health of San Francisco. When the Act creating this unnecessary office was passed, we commented strongly upon the economy of the Legislature which could afford to provide the unnecessary salary for this office, and which could not, however, provide for a State Sanitary Inspector, who would have proved a far more useful and necessary official. Amongst the financial reforms suggested by GOVERNOR BUDD was the abolition of this office, and it bids fair to go the way of places created for services rendered.

Assembly Bill 427 provides for the appointment of a State Veterinary Surgeon. He must be a graduate of a recognized Veterinary College, and his term of office shall be four years. He shall keep his office in San Francisco, and receive a salary of $3,000, with necessary travelling expenses. Assembly Bill 210 provides for a State Veterinarian, and for County Veterinarians as well. The term of office, qualification, and salary shall be the same as that under Assembly Bill 427, but the office is not fixed in San Francisco. County Veterinarians, one for each county, shall be appointed by the various Boards of Supervisors, with the consent and approval of the State Veterinarian. Their salaries are fixed at not less than $75 nor more than $150, with travelling expenses. The State Veterinarian shall prescribe their duties, and he shall coöperate with the State Board of Health in protecting the health of the public, and of domestic animals from contagious and infectious animal diseases. Provisions are made in both Acts for dealing with these diseases by quarantine and by the destruction of affected animals.

There are several bills relating to the adulteration of food. Senate Bill 527 amends the Act of 1887, prohibiting the sophistication and adulteration of wine. It greatly condenses the original act: abolishing the pure wine label of the State as well as all reference to stamps, and specifies that every manufacturer of, and every person or firm or corporation dealing in or handling wines, shall mark every wooden package with the firm's name, and with the variety of the wine sold. The various adulterations enumerated are continued and amplified. Senate Bill 207 regulates the sale of milk, by providing that any person selling or exchanging adulterated milk or milk to which water or any foreign substance has been added, as well as milk from sick or diseased cows, shall be punished by a fine of not less than $50, nor more than $200, for the first offence, and for the second offence a maximum penalty of $300 with imprisonment is added. In subsequent offences the fine is reduced to $50, and the period of imprisonment increased to ninety days as a maximum. Pure milk, under this act, does not mean skimmed milk, as removal of any portion of the cream before sale or delivery will render the seller liable to the penalties of this act. "Uncondensed gothic letters, not less than one inch in length," denoting that the can contains "skimmed milk" will absolve the dealer from any penalty in connection therewith. Milk which, upon an analysis, contains more than 87 per cent. of water, will be deemed adulterated. Senate Bill 509, to prevent deception in the sale of cheese, provides that cheese offered for sale must be labeled "pure cream cheese" or "filled cheese" in large letters, according to the facts in the case. Senate Bill 202, to provide against the adulteration of food and drugs, is practically the same as the law now existing in many States, such as Ohio and New Jersey. Drugs will be deemed adulterated "if, when sold under or by a name recognized in the United States Pharmacopia they differ from the standard of strength, quality or purity laid down therein." Foods will be deemed adulterated if anything is added to depreciate and injuriously affect their quality, strength or purity. Other adulterations are mentioned and penalties are provided for infringement.

Assembly Bill 533 authorizes the State Board of Health to procure, manufacture and distribute, through some department of the State University, the medicinal substance known as diphtheria antitoxine. The sum of $6,000 is appropriated for this purpose. At present there is no department of the State University which is in a position to conduct the manufacture of such a product, and it might be well to await further evidence as to the undoubted and continued efficacy of the new toxine before providing for its permanent manufacture. Assembly Bill 219 appropriates the sum of $250,000 to be expended by the Regents of the University of California "in the erection of buildings on the site of the State University at Berkeley, for the use of the State University." This bill was supposed to provide for a new building, which the affiliated colleges of medicine, dentistry, pharmacy and law had hoped would be erected in San Francisco for their combined used. At previous sessions of the Legislature the Medical Department of the University procured the introduction of a measure appropriating money for the erection of a medical college in San Francisco. On one occasion the bill passed both Houses, but failed, owing to enforced economy, to receive the Governor's signature. These measures had always been received with suspicion, and had met with a great deal of opposition, on the grounds that the Toland Medical College was a private institution and not the property of the University. In pointing out this error, in fact, we stated that a request for such an appropriation should properly come from the Regents of the University, and that the claim would be greatly strengthened if the other affiliated colleges, particularly the Hastings College of Law, could be induced to come in with and help support the demand. All these suggestions have been embodied in the present claim, which is endorsed by the Regents, and as the Governor is an alumnus of the University, which has also a number of its alumni in both Houses, it is probable, unless rigid economy demands its omission, that an appropriation will be made. Assembly Bill 165 provides for the protection of patients from extortion by dishonest physicians and druggists. Its provisions should be carefully read by every druggist and physician throughout the State. Any druggist engaging to pay commissions to a physician shall be guilty of a misdemeanor, and any physician agreeing to receive or receiving any money or property as such commission from the druggist will be similarly guilty. Any physician prescribing an article or preparation of medicines by arbitrary signs, names, or numbers in such a manner that any competent pharmacist cannot dispense it, and shall refuse to give him the proper name or formula upon application, or shall indicate by arbitrary signs, etc., the amount that the druggist shall charge for filling such prescription, shall be guilty of a misdemeanor. Any pharmacist refusing to furnish any other pharmacist, on application, the name or formula of any preparation that he may know, as designated by a physician who prescribes by arbitrary signs, etc., or who shall base his charges upon secret suggestions thereto contained in the prescription, shall be guilty of a misdemeanor. It would, no doubt, be difficult to carry out the provisions of this Act, but we most heartily commend it as directed against the absolutely indefensible and altogether disreputable practice of receiving commissions on prescriptions, which is, in some quarters, unfortunately, too common.

Assembly Bill 194 authorizes the incorporation of mutual associations for life and accident assurance on the assessment plan. Senate Bill 310 adds two sections to the Penal Code providing for the punishment of "open and notorious cohabitation and adultery." The punishment for the former offence is $1,000, or imprisonment in the county jail, or both. In the case of adultery, the punishment is imprisonment in the State Prison not exceeding three years, or by fine not exceeding $1,000. Section 289 provides that "when the act is committed between a married woman and a man who is unmarried, the man shall be deemed guilty of adultery. Whether this absolves the "married woman" is not, however, quite clear. Senate Bill 420 amends Section 261 of the Penal Code relating to rape, by making the age of the female, in case of consent, under ten instead of under eighteen, as it at present stands. Senate Bill 416 adds a new section to the Penal Code, which is identical with Section 274, but instead of prescribing the penalty therein contained the section reads, "And such woman die in consequence thereof, or in consequence of any disease ensuing therefrom, [the person] shall be prosecuted and punished for manslaughter." Senate Bill 415 amends Section 192 of the Penal Code relating to homicide by making an "attempt to commit an abortion, unlawfully, in consequence of which or of any diseases ensuing therefrom the woman dies," manslaughter.

Assembly Bill 276 adds a new section to the Political Code, to be numbered 3036. This is the bill which has been introduced at the instigation of the San Francisco Society of Eye, Ear, Nose, and Throat Surgeons, and which has been endorsed by the State Society, with the recommendation that its committee on legislation aid its passage. The bill, the text of which has already been published, provides that should one or both eyes of an infant become reddened or inflamed at any time within two weeks after birth, it shall be the duty of the midwife, nurse, or person having charge of said infant to report the condition of the eyes at once to some legally qualified practitioner in the town or district in which the parents of the infant reside. A fine of $100 or imprisonment for three months is provided as the penalty for non-compliance with these provisions. None but the oculist knows so well the number of blind persons whose affliction is due entirely to neglected ophthalmia neonatorum. Even where permanent blindness does not occur serious impairment of vision from destructive corneal changes may ensue. If this measure will even succeed in directing public attention to so serious a disease it will accomplish much. Many of these cases are regarded as "colds," or as the natural or inevitable consequence of the first few days of the infant's life; and this view of the case generally results in irreparable damage. Some of the legislators appear to take a humorous view of this measure; one member stating that all his children had red eyes without affecting their vision. This misfortune, however, should not jeopardize important legislation, and we hope that the bill, which cannot do any harm, and which is not a source of expense, may become a law.

Assembly Bill 238 amends Section 2218 of the Political Code relating to the commitment of insane persons by adding that "no female insane person shall be taken to an asylum without the attendance of some female, or some relative of such insane person." The omission of such a clause from the Code has frequently been the cause of proceedings, both shameful and outrageous, in the handling of the insane when on their way to an asylum. In many cases no provision was made for a female attendant, and where the journey lasted for a number of hours, or even over night, the inevitable results of sending an insane woman in charge of a man, only, were simply disgraceful. Assembly Bill 371 amends the Act of 1889 relating to the sale of intoxicating liquors to persons inordinately addicted to their use. It substitutes for written notice upon the persons supplying the inebriate with liquor "a publication of such notice, with an accompanying affidavit, once a week for four successive weeks in a paper of general circulation published in the township where the inebriate resides." The penalty remains at six months, or a fine of $200, or both, and the usual exemption for physician's prescriptions is provided. Senate Bill 297, amending Section 337 of the Civil Code relating to the limitation of actions, is one which, if passed, it will be well for physicians to bear in mind. It provides "that in actions upon accounts the cause of action shall be deemed to have accrued upon the date of the last item." Hitherto physicians' bills were outlawed after two years, unless extended for one year by commencing action. Under this law any outlawed account can be revived for collection if a new indebtedness be incurred.

Assembly Bill 500 provides for the erection of a State Hospital for the care of the indigent sick and disabled persons. This Hospital shall be established in San Francisco. The sum of $100,000 is appropriated for the purchase of site, erection of buildings and necessary furnishing. The Hospital shall be under the management of the State Board of Health, which shall virtually act as its Board of Trustees and which shall elect a Superintendent, at a salary of $2,500 per annum, together with such further attendants or medical assistants as may be deemed necessary. This is altogether foreign to the duties of the State Board of Health, nor is it apparent why this building should be erected in San Francisco, when it might, if erected on a suburban site, be made in part self-supporting. It is undesirable that the bill should pass in its present form.

Senate Bill 247 (A. B. 229) repeals the successive Acts of 1862, 1870 and 1876, under which the Home for Inebriates in San Francisco was originally established and has since been conducted. No provision is made in this bill for anything to replace this institution. Assembly Bill 449 relates to the same subject. It also repeals the establishing and all subsequent acts relating to the Home, but adds a new section — 3022½ — to the Political Code. It provides that in any city where the Board of Supervisors have already set apart land for public use, as a Home for Inebriates, there shall be erected, before August 1, 1896, a suitable hospital for the care and treatment of dipsomaniacs and inebriates. The plans of construction for the building shall be drawn under the direction of the local Board of Health, and when said building is completed the Board of Health shall notify the magistrates of the county that the Hospital is ready. Magistrates may commit, for a term not exceeding one year, any dipsomaniac not of bad repute or bad character, apart from his inebriety. The person committed may be released on permit of the Medical Superintendent and the Board of Health, when deemed advisable, but may be rearrested if he renders this permit void by infringing its conditions. The local Board of Health will have the management of the Hospital and shall elect all its officers. The Medical Superintendent shall be an elector of the county, not less than 35 years of age, and who shall, for a period of at least one year prior to his appointment, have devoted his special attention to this subject. He shall not be removed except for good cause, duly set forth in a complaint, filed with the Secretary of the Board.

THE DOCTOR AND THE INCOME TAX.

On or before the first Monday in March, 1895, all persons having an income of more than $3,500 per annum shall make a return of their income, gains, and profits to the Collector or Deputy Collector of the district in which they reside. In case of failure to make such return the Collector shall make such list or return from the best sources available, and shall then proceed to collect the tax, with 50 per cent. added as a penalty. There is a further penalty of 100 per cent. for making false or fraudulent returns. There is no statute of limitation in the case of this act, and the tax and penalty may be collected at any time in the future. Beyond the announcement that the tax is due and payable no further effort will be made to collect it until past due. The necessary forms for making the returns can be obtained from the Collector, or a deputy, of the district in which the applicant resides. These must be properly filled out, sworn to, and in his hands on or before the first Monday in March, and no allowance will be made for inadvertence, or for any delay in the mails.

The tax levy only relates to gains and income in 1894. Thus, money collected in 1894 for services rendered the previous year will not be returned. All cash and solvent credits, together with revenue from any source other than practice is returnable. In making the return, however, all book accounts must be set down. It is then permissible to deduct all that are regarded as worthless, and in which "it clearly appears that the debtor is insolvent, and that proceedings to collect the debt would avail nothing." Any account regarded as good at the time of making this return, but subsequently ascertained to be worthless, may be deducted when making the next annual return.

The foregoing, which may be regarded as the gross income, admits of the following deductions: "Exempt by law $4,000. Interest which has become due or which has been paid during the year. National, State, county, school, or municipal taxes paid within the year, not including taxes assessed against local benefits. Amount expended in the purchase or production of live stock, or produce sold within the year. Necessary expenses actually incurred in carrying on any business, occupation, or profession, and not elsewhere deducted in this return. Losses actually sustained during the year, incurred in trade or arising from fires, storms, or shipwreck, and not compensated for by insurance or otherwise, and not already deducted in ascertaining profits. Actual losses on sales of real estate purchased since December 31, 1892. Debts ascertained within the year to be worthless, and not elsewhere deducted in this return. Cost price of material purchased for manufacture or re-sale, not increasing stock on hand December 31, 1893. Dividends, heretofore included in the statement of profits, under paragraph 13, received from corporations, companies, or associations, on which the tax of two per centum has once been paid by such corporation." Under the head of necessary expenses the physician may return all money expended in the conduct of his business. Wages of all persons employed in connection with his business directly may be deducted. Amounts expended in the purchase of new books, subscriptions to medical journals, new instruments, are not legitimate deductions. State, county, or municipal salaries are not to be included in the return of income. Only one deduction of $4,000 is allowed for any one family consisting of parents and minor children, and all income accruing in that family to any member and from any source not specifically exempted must be returned. The tax is payable on or before the first of July of each year, and penalties are provided for non-payment.

From the foregoing it will be seen that the new law affects a large number of physicians practising in the Pacific coast States and Territories. While many of these, after the proper deductions and allowances have been made, will not have a net income that is taxable, this does not relieve them from making the return of their gross income in full detail. It is doubtless the intention of the department to preserve the returns for statistical purposes, and as the time is now very brief in which the returns can properly be made, it will be well for every physician to do some figuring, and if the total exceeds $3,500, he should promptly procure the blank form and fill it out at the earliest possible opportunity. This whole matter of facts and figures is regarded as confidential by the department. Penalties are provided for the disclosure of any information in connection with returns that have been filed. It is also made unlawful to make any publication of names or figures in relation thereto. The following are the names of the Collectors for the districts in California and Nevada: First District, O. M. WELBURN, San Francisco; Second District, W. STAIRLEY, Sacramento. The First District of California comprises all of the State south of the counties of Marin, Sonoma, Solano, Sacramento, Amador and Alpine. The Fourth District comprises all these counties, and all of the State of California to the north as well as the State of Nevada. We shall be glad to assist our readers in the further elucidation of this rather intricate subject.

NOTES.

Pacific Coast Association of Examiners for Life and Accident Insurance Companies.

The meeting held in Portland, Oregon, January 30, 1895, to complete the organization of this Association was marked by much enthusiasm upon the part of those present. The new Society began its work with 66 charter Fellows. Dr. R. Kelly was elected as President, and Dr. Henry W. Coe, of Portland, Oregon, Secretary. A Vice-President was chosen from each Pacific coast State, the Vice-President from California being Dr. F. D. Bullard, of Los Angeles. The fellowship fee was fixed at $2. There are no dues. The next meeting of the Association will be held at Seattle, in May of this year, at the time of the meeting of the State Medical Society of Washington. Application for membership should be made to Dr. Coe, at Portland, Oregon.

The Semi-Annual Meeting of the Nevada State Medical Society.

The semi-annual meeting of the Nevada State Medical Society was held in Reno, January 14, 1895. After the transaction of routine business and the admission of new members, papers worthy of mention were read by Dr. Jas. Guinan, of Carson, and Dr. P. T. Phillips, of Reno. The subject of Dr. Guinan's paper was "Bilious Remittent Fever," the author taking the stand that there is no typhoid fever in this locality. The paper was thoroughly discussed and was particularly interesting, as it brought out the relations of typhoid, bilious and the so-called mountain fevers. The subject of Dr. Phillips' paper was "The Modern Treatment of Wounds." [To be published.] After the adjournment of the afternoon session a banquet was given to the visitors by the local profession, which was a very enjoyable affair. At the evening session a resolution for general publication was adopted, with regard to the care of tuberculous patients, so as to prevent the spread of this disease in a community where at present it is not known, with the exception of cases that have come to the State for the benefit of its climate. The election of officers for the ensuing year resulted as follows: Jas. Guinan, Carson, President; P. Manson, Virginia, Vice-President; T. B. Holmes, Wadsworth, Secretary. The Society adjourned, to meet at Virginia City on the first Monday in July.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, December 18, 1894.

The President, W. F. WIARD, M.D., in the Chair.

Corrosive Sublimate Poisoning.—DR. H. D'ARCY POWER reported a case in which the patient had taken 2½ grains of corrosive sublimate without any untoward symptoms except vomiting. The patient, on the following day, appeared to be perfectly well.

DR. F. L. ATKINSON read a paper on "The Treatment of Abortion." [Published at p. 83.]

DR. THOS. ROSS said the subject was an important one from the frequency with which these things occur and the evils that they may cause. The history of many patients complaining of uterine disease dated some two or three years back from the time when they had had an abortion. He regarded it as bad practice to administer opium or ergot, as the latter may cause persistent uterine contractions, which were not desirable. In many cases, by the exercise of some patience and the application of a tampon, the fetus would be expelled in a short time. In abortion the management of the afterbirth is the main thing. Dr. Gaylord Thomas says that between the third and fourth month the attachment of the placenta is very firm, and in cases, at this period, the ovum may be expelled and the placenta retained. Here the only thing to do is to dilate and curette, thoroughly irrigating with bichloride or creolin solution.

DR. F. B. SUTLIFF: Extreme cleanliness is the great point. The treatment resolves itself into whether we allow nature to expel the contents of the uterus unaided, or whether we should dilate and curette. He particularly objected to treating the other fellow's cases which we were all called upon to do from time to time.

DR. T. W. HUNTINGTON: The management of these cases depends upon the accompanying circumstances. Nearly every case has its peculiarities. In his own practice these cases usually occurred in the homes of the poor, rendering asepsis practically impossible. In operations, previous to the fourth month, he made no special haste to interfere up to the time that there was a rise in temperature and pronounced hemorrhage. If this occurred radical interference should be employed and the uterus cleared out and protected from extraneous contamination.

DR. H. W. STRADER said his experience in this class of cases was very unsatisfactory. He was less inclined than formerly to be radical.

DR. C. E. FOWLER said where the pain was excruciating he used suppositories of opium with great benefit; the contents of the uterus being expelled under the accompanying relaxation.

DR. H. L. NICHOLS: As a rule abortions caused by a fright or accident resulted favorably. If there be hemorrhage, tamponing the vagina will usually check the hemorrhage and stimulate the uterus to contract. He could not agree with the previous speaker that abortions occurred so frequently amongst the poor. In his experience they were far more frequent among the rich and well to do. We know that abortions are performed daily in our midst by men who are considered respectable. He asked the Society to promptly place the seal of its condemnation upon this nefarious work wherever it may be found.

DR. J. H. PARKINSON said his cases usually occurred amongst the middle class or well to do people; in the very poor pregnancy running to full term is the rule. Regarding "the other fellow's cases," of which Dr. Sutliff had spoken, he had made it an invariable rule not to interfere with them in any way. In most cases the woman denies the fact of any interference on her own part, or at the hands of any one else, and this denial often interfered with effective treatment. With reference to hemorrhage he always remembered a remark ascribed to Dr. Simmons, who had said that he had never yet seen or heard of a case where a woman had died from hemorrhage in abortion. Hemorrhage, if severe, could generally be controlled by the tampon, which, in the form of the colpeurynter, was most effective. He watched the temperature closely, and if it began to rise did not hesitate to interfere. Instrumental interference should be thorough, or measures of this character had better not be adopted. Efficient dilatation, followed by careful and thorough curetting and irrigation, was then the proper treatment.

Dr. G. A. White said this was a subject with which all had been brought face to face many times. Dr. Sutliff had struck the key note when he spoke of the other fellow doing the work. From the latest reports he had heard the price in some quarters was $25, though in some instances he had known it to rule lower. He did not think that his method of treatment differed from that of other speakers. Irrigation, when employed, should be very free, and there should be an ample opportunity for exit of the fluid. He had sometimes used a solution of permanganate of potash, irrigating several times during the 24 hours. In extreme cases of hemorrhage the uterus itself might be tamponed. The strictest cleanliness should always be observed.

Dr. H. D'A. Power: Most of these cases would end satisfactorily if nothing were done. Personally he favored the expectant plan of treatment, and had only dilated when there was a rise of temperature or hemorrhage. He remembered one case where the fetus was expelled, and the patient remained in bed until the eighth day, when, on getting up, she was taken with pains, when the afterbirth came away, no symptoms having occurred meanwhile. Subinvolution results oftener from abortion than from pregnancy, as the physiological growth of the uterus sometimes continues after the fetus has been expelled. Ergot controls hemorrhage. The tampon prevents hemorrhage and at the same time aids expulsion.

Dr. L. A. Harcourt regarded these cases as very important. There was very little danger from the accidental cases; the intentional ones being the more serious. The important features are the amount of hemorrhage and the saving of the product of conception if possible. With slight hemorrhage rest and anodynes will usually be sufficient. In severer cases tamponing was called for, and after 24 hours the fetus would often be expelled. No woman should die from hemorrhage previous to the fourth month if properly treated. The majority of these cases are due to intentional traumatism. The profession should set its face against this practice, as it was nothing less than murder. No man could guarantee that his patient would be alive 24 hours after the operation. The admission of air into the uterine sinuses sometimes caused immediate death. The physician was placed in a very bad light in these cases. The woman's life had been jeopardized by some wretch, and yet it was impossible to interfere. Criminal abortion was one of the greatest crimes, and should be punished severely. It occurred oftener amongst the rich than the poor. The general public should be educated that a physician cannot be hired to commit murder.

Dr. G. G. Tyrrell said he gave opium in these cases and regarded it as one of the most valuable drugs. It relieved pain, relaxed the uterus, and the fetus was expelled.

Dr. G. C. Simmons believed that in Sacramento we had more abortions than deliveries at full term. During the past month he had attended six cases of abortion and four cases of childbirth. He thought a solution of bichloride of mercury of one to three thousand was too strong. At the Boston Lying-in Hospital he remembered a case where poisoning had occurred, a solution of one to twenty thousand had been employed.

Dr. H. H. Look said he had pursued the expectant plan in these cases. Referring to the statement of Dr. White, that the price in certain quarters was $25, he understood that the figure on K street was as low as $10.

Dr. W. E. Briggs said the loss of blood in abortions often affects the eyes. He had seen two cases where excessive loss of blood had caused amblyopia. In one of these the blindness was almost total, but passed away in a few weeks.

Dr. Atkinson, in replying, said the main object of the paper was to bring before the Society the question of immediate dilatation as against the method of non-interference. He believed the same results could be accomplished by tamponing the vagina under antiseptic precautions and waiting for the uterus to expel its contents. With proper care the tampon could safely be allowed to remain in place for 24 hours.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, December 11, 1894.

The President, C. C. Wadsworth, M.D., in the Chair.

New Member.—M. H. Woolsey, M.D., was duly elected a member of the Society.

Dr. W. H. Mays reported eleven cases of vaginal and abdominal hysterectomy.

Dr. H. Kreutzmann said the term hysterectomy should only be used in cases where the entire uterus was removed. He thought it better to remove the appendages, especially if the operation was performed before the menopause.

Dr. G. F. Sheils said the term hysterectomy need not include the whole uterus any more than the operation of enterectomy would imply the removal of the whole intestinal canal.

Dr. F. W. Vowinckel believed that hysterectomy should only apply to removal of the entire uterus. He inquired of the author how his operations in recurrent cases had resulted? How long were the cases benefited, and to what extent? Did Dr. Mays employ the high amputation in affections of the uterus?

Dr. C. G. Kuhlman said the paper had been well presented and might be considered scientific, if we were justified in removing the uterus and appendages whenever we made a diagnosis of cancer or of fibroma. Leading surgeons in various countries are now advocating conservatism in the surgery of the female pelvic organs, because evidence is rapidly accumulating that a large percentage of cases diagnosed as carcinoma of the uterus were really benign conditions, such as condylomata and papillomata, which would be curable by other methods. Atrophic induration, or cirrhosis, following hyperplastic processes had also been diagnosed as fibroma in a large number of cases. Surgeons were altogether too willing to operate. We should not operate too early, simply because it is the fad; we should give the woman a chance—give them the benefit of the doubt. Apostoli's method and therapeutic means will control hemorrhage in fibroids and will cure induration due to hyperplastic processes. Absence of pain in carcinoma uteri in women who have passed the menopause is due to inherent diminished sensibility of the uterine nerves. Paresis-atrophy follows changes that the uterus undergoes during the menopause. We are not justified in operating in malignant disease of the uterus when it has extended into the tissues beyond the uterus, because the physical suffering attendant upon the rapid recurrence, coupled with the fact that these cases terminate fatally in a comparatively short time after operations—if they survive at all—are horrible, as compared with the previous condition to which the organism has gradually adapted itself and which can be alleviated by therapeutic means.

Dr. G. W. Davis inquired as to the manner of ligature. The tubes, he thought, became more or less affected. It was a question whether the vaginal operation was not the preferable one in all cases where applicable; he believed it was. Lawson Tait's statistics show a mortality of 3 per cent., while Jacobs reports only 1.4 for vaginal hysterectomy.

Dr. Mays in replying, said: It is rare to find infiltration of the adnexa. The high amputation has gone out of date. He had used it in an unmarried woman where the vagina was small, and later on had removed the uterus by laparotomy. In the recurrent case operated upon, the operation was done as a forlorn hope, the patient insisting that much of the disease could be removed by some procedure. In this case he had severed one of the ureters, which was imbedded in the cicatrix, and it was necessary to stitch it into an incision made in the bladder wall. The case did well and went home in a very much better condition of mind and body. He used Wood's needle which was curved sharply at a very acute angle.

Dr. H. Kreutzmann exhibited a pathological specimen removed at the German Hospital from a woman 53 years of age. He at first thought she was affected with cystocele, but upon operating he removed a cyst-like sac the size of a small orange, situated between the uterus, and the bladder, and containing a sero-purulent fluid with some granular detritus.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, October 20, 1894.

The President, John F. Morse, M.D., in the Chair.

Dr. J. H. Barbat exhibited an appendix vermiformis, and read notes, under the title of "Operate Early in Appendicitis," of three cases, with remarks on the necessity of operation on appendicitis whether recurrent or not. [Published at p. 86.]

Dr. Dudley Tait: Two years ago I should have endorsed all of Dr. Barbat's remarks, especially those relating to early operative measures. Personal experience has caused me to change my ideas, and at present I am prone to discountenance the popular practice of operating early in every case of appendicitis. During the last five years 13 cases of appendicitis came under my personal observation; all recovered. In 5 only was surgical interference seemingly necessary, 2 of these being recurrent and general infection seeming probable. In 4 cases the appendix was found gangrenous, and could be torn away by shreds. In one of these cases a perforation was not noticed at the time of the operation, though undoubtedly present, but made itself manifest 5 days later by an escape of gas when the patient rolled over on the opposite side. The fistula healed spontaneously at the end of the third week. In one case of perforation it was found necessary to resect 6x8 inches of omentum which lay in the pus cavity. In 2 cases, endeavoring to remove as much as possible of gangrenous and pyogenic tissue, I opened the general peritoneal cavity. Careful irrigation and the use of gauze drainage prevented any untoward results. There is perhaps nothing more perplexing than the question when and where to stop the operation in suppurating cases of appendicitis. The necessity of breaking up adhesions and the possibility of thereby infecting the general peritoneal cavity should always be borne in mind, and I deem it more advisable to err on the conservative side than to take great risks. Perforation is not always fatal. In one case I operated successfully 48 hours after perforation. In stating the results in many cases, I may add that I consider myself lucky to have had a fortunate series; but few conclusions can be drawn from so limited a number of cases. In presenting cases of appendicitis, it would appear from recent publications that authors have considered under one heading all the acute and chronic infections of the cecal region. This I deem an error. We should not discard altogether the affections so accurately described by the clinicians of the past generation. Perityphlitis and colitis have been demonstrated pathologically, and all surgeons have met with suppuration of the retro-cecal space independent of lesions of the appendix, recovery being attained by simple incision. To determine exactly the proper time to operate is a very difficult question, and I cannot attempt to answer it. I do not think there exists an early positive sign or symptom indicating a virulent type of infection and demanding immediate surgical measures. In my opinion we should consider very closely the patient's general condition; the course of the temperature and pulse may prove very valuable guides; increasing local tenderness and distension are reliable indications. The location of pain may differ very much. In only three of my cases was it located at McBurney's point. Pain, especially at the beginning of an attack, may be complained of in any part of the abdomen, high up on the right side in the epigastrium, or even on the opposite side. The variable position of the appendix may explain this fact. None of my cases showed evidences of foreign bodies in the diseased appendix; fecal matter is frequently found. The purgative as well as the opium treatment is nonsensical. The speaker asked Dr. Barbat how he would explain the presumed McBurney's painful point, considering that Bryant and others had showed that the position of the appendix varied considerably.

Dr. Barbat said the pain is generally at the base of the appendix, which is usually at a fixed point.

Dr. G. F. Shiels: I agree with Dr. Tait that a great many of the so-called cases of appendicitis are not appendicitis but inflammations of the cecum and colon; the appendix has proven of danger in these cases, and its removal produced a cure. In the hands of thoughtful and able surgeons early operation is a good thing, but it seems as if appendicitis was becoming a fashionable disease. The professional "cutter" makes a point of cutting in every case, and nearly every man who cuts for money cuts for appendicitis. I am of the opinion that this operation should not be done so often, and I believe that the operations are out of proportion to the cases, but at the same time where the diagnosis is positive, and the symptoms warrant it, it should be done.

Dr. D. D. Crowley: I have never been called upon in Oakland, with its 60,000 people, to perform this operation during 16 years, but in an Eastern town of 400 inhabitants I visited lately, there were 15 cases where it had been done within a year. Two of the cases were real, one of them being gangrenous, the other 13 I would not swear to, and I am led to believe it is rather a fad. The majority of the cases have their origin in inflammation of the cecum; and I agree with Dr. Tait and Dr. Shiels that only when certain symptoms are present is an operation necessary, especially after two or three recurrent attacks. I believe it is best to invert the stump, after operation, using Lembert sutures.

DR. BARBAT, in replying, said: After operating I pull out the lining mucous membrane of the stump and cut it off short, then turn in the serous coating and use Lembert sutures. I do not operate every time I get a case of appendicitis; in the case of my brother, operation was unavoidable. I myself am a victim of conservative surgery. I was treated for obstruction of the bowels by good and careful physicians, who gave me morphine and purgatives. Thirty-six ounces of castor oil were taken in 24 hours; the bowels moved, and my attendants thought the trouble was over. I then felt a painful induration in the right iliac region, and while pressing with my hand felt something give way, causing intense pain. In ten days I felt a bulging over the ribs on the right side; an aspirating needle was inserted, and a quart of most offensive pus drawn out. After this I was aspirated several times, but still kept filling up. A free incision was made, a drainage tube inserted, and the cavity finally closed up. At that time appendicitis was not recognized; had it been, and had my appendix been removed, I would have been in a better condition to-day. As it is, only two weeks ago I felt the trouble coming on, and made all preparations for an operation, but the attack subsided, though there is still a spot of induration present, and I know it is only a question of time until my appendix will have to be removed.

DR. TAIT asked if the method of incision employed was the one recently advocated by McBurney.

DR. BARBAT: In these cases I made my incision along the right margin of the rectus muscle, but in the next case I will use McBurney's method, where the incision in the skin is in a line with the fiber of the external oblique. The three layers of muscle are separated in the line of their fibre without any cutting. I think this method would need a special retractor, but as yet I have seen no suitable instrument.

THE PRESIDENT called attention to articles in the *Medical News* of May 19 and June 26, 1894, by Dr. John Deaver, and having read extracts said: I consider this a most classical paper, it covers the ground more fully than any I have ever read on the subject.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, December 3, 1894.

L. C. LANE, M.D., in the Chair.

Gunshot Wound of Skull.—DR. GEO. B. SOMERS presented a case of old gunshot wound of the skull. He said: This case fell under my care in the City Receiving Hospital, and a short account of it was published at the time in the OCCIDENTAL MEDICAL TIMES, vol. vi, page 198. This boy, now 16 years old, was shot in the forehead by a companion about three years ago, and the bullet, from a short 22-caliber cartridge, is probably still lodged somewhere in the brain. When first treated, about 2 or 3 teaspoonsful of brain matter were lost, and the inner plate of the frontal bone, for a distance of about one and a half square inches was shattered and was removed. The opening left in the outer plate was perhaps two-thirds of an inch in diameter. The case recovered at the time without any particular symptoms supervening. For two years the boy showed no resulting trouble, mental or physical, but finally epileptic seizures began. During the last year he has had about sixteen, coming on at irregular intervals. The only external symptom that the boy shows is the pulsating cicatrix at the seat of the old wound. The brain scar beneath, whatever its nature, is probably the source of the irritation. I propose to open up the wound in a few days and remove as much of the scar tissue as possible, and probe for the bullet. Even if the bullet be not found, the history of such cases warrants the hope that the mere removal of cicatricial tissue will ward off the convulsions perhaps for several years. That the operation will result in the permanent removal of the convulsions is not to be expected.

DR. WM. FITCH CHENEY read a paper entitled "The Rotch Formula for Infant Feeding" [published at p. 59].

Dr. J. O. Hirschfelder referring to the formulas of Biedert said that at the Presbyterian Hospital two years ago, they showed him milk which had come from the laboratory in answer to a prescription of the attending physician. For each child a daily prescription is made out. Skimmed milk is taken as a basis in the laboratory, and the ingredients are added according to the prescription. He saw a number of such prescriptions and they varied greatly. If it was found that the sick child, usually with gastro-enteritis, continued to have diarrhea when the milk contained a certain amount of fat, the prescription for the next day would be made out to contain less fat. There was some talk of opening such laboratories for the poor. It was thought that such laboratory work would greatly extend.

Dr. L. C. Lane referred to the work of Jacob Moleschott, who made exhaustive analyses in this field. As a substitute for milk, the best thing he had found was the yolk of an egg, to which a little sugar is added.

Dr. Albert Abrams read a paper entitled "The Antitoxine Treatment of Diphtheria" [*vide* Medical Times, vol. iv, p. 13].

Dr. J. O. Hirschfelder said there is no question as to the efficacy of the antitoxine treatment of diphtheria. It had been investigated by numerous brilliant men in Germany and in New York. The treatment had been followed by a very decided reduction in mortality. The antitoxine used is being constantly increased in potency. The name antitoxine would probably rather indicate that there is a chemical antagonism between two substances. According to Buchner this is probably not the case. It is true that a mixture of toxine and antitoxine produces a negative result on the animal, but Buchner found that this varied in different animals. However, the fact remains that the antitoxine practically antagonizes the poison or its effects. Perhaps, in the future, other methods of producing the antitoxine will be devised than the present one of passing the culture through an animal. If any one should discover a method of producing antitoxine chemically, he would then have done for medicine what Lister did for surgery.

Dr. G. O. Willis, of Greenville, Plumas county, said that he understood that much of this antitoxine matter was due to the labors of a Californian, Dr. Nuttall, now in Johns-Hopkins, who demonstrated the germicidal action of blood serum.

Dr. W. F. Cheney wished to call attention to the fact that an attack of diphtheria did not confer immunity on the individual for more than a limited time. He mentioned the recent paper read in Berlin, by an assistant of Prof. Virchow's, in which grave doubts were expressed as to the efficacy of the antitoxine treatment of diphtheria and of the innocence of the "heilserum." Would this cure have the same fate as the Koch tuberculin?

Dr. Abrams said we must recognize this, not as a new or sudden discovery, but as a development. Various facts led up to it. Von Behring came to his conclusions after a long series of investigations. By a single injection of his "heilserum," immunity is secured for from 14 to 20 days. At the infectious hospital in Berlin, local applications have been given up and only the serum is used in diphtperia. Local applications are dangerous anyway. In regard to the prevention of diphtheria, he knew of no more perfect system than that carried out by the Board of Health of New York, with regard to laryngeal croup. Eighty per cent. of these cases are cases of diphtheria localized in the larynx.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held January 4, 1895, the following were granted certificates to practise medicine in this State:

George Edwards Abbott, Coronado; Harvard Univ. Med. School, Mass., Feb. 14,'72.
Charles Wesley Bayley, Oakdale; Med. Dept. Univ. Vermont, June 28,'76.
Reunette E. Fuller Boone, Los Gatos; Med. Coll. Syracuse Univ., N. Y., June 9,'81.
Warren Brown, San Francisco; Bellevue Hosp. Med. Coll., N. Y., Mar. 11,'89.
William B. Charles, Lemoore; Med Dept. Univ., Louisville Ky., Mar. 1,'87.
Charles W. Fish, Los Angeles; Med. Dept. West. Reserve Univ., Ohio, Feb. 27,'84.
Charles O. Gates, Fresno; Kansas City Med. Coll., Mo., Mar. 20,'93.

Chester Hard, Los Angeles; Indiana Med. Coll., Ind., Feb. 17,'48; Med Dept. Univ. of Mo., Feb. 18,'54.
Winfield S. Laton, Minneapolis; Long Island Coll. Hos., N. Y., June 21,'77.
George W. McClellan, Los Angeles; Med. Dept. Univ., Buffalo, N. Y., Feb. 25,'85.
Henry Newland, Los Angeles; Coll. Phys. and Surg., Keokuk, Ia., Feb. 17,'76.
George J. Rubleman, Los Angeles; Rush Med. Coll., Ill., Feb. 24,'80.
John Frumbull, Montecito; Harvard Univ. Med. School, Mass., June 27,'83.
E. S. De Puy, Smith River: Med. Dept. Univ. of Cal., Nov. 20,'94.
Thos. B. W. Leland, San Francisco; Med. Dept. Univ. of Cal., Nov. 20,'94.
B. F. Alden, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Thos. De H. Blodgett, San Francisco: Cooper Med. Coll., Cal., Dec. 6,'94.
Arthur C. Collins, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
P. J. W. Conran, San Francisco; Cooper Med. Coll., Cal., Dec 6,'94.
Geo. W. Desrossier, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
John Rice Eldridge, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
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Joseph S. McCormick, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
J. Mora Moss, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Avron S. Newman, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Theodore T. Purkitt, Willows; Cooper Med. Coll., Cal., Dec. 6,'94.
James F. Smith, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
John J. Spottiswood, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Tyre Harrison Stice, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94,
Chas. E. Turner, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.

CHAS. C. WADSWORTH, Secretary,

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army, from December 20, 1894, to January 20, 1895.

Assistant Surgeon Capt. Edward R. Morris, on the arrival of Assistant Surgeon Capt. Paul Clendenin at Fort Warren, Mass., will be relieved from duty at that post and will report for duty at Fort Spokane, Washington.

Assistant Surgeon First Lieutenant Charles E. B. Flagg, now on duty at Angel Island, Cal., will report in person at Fort Townsend, Wash., for temporary duty at that post.

Assistant Surgeon First Lieutenant George D. De Shon, will proceed from Fort Logan, Colorado, to Fort Douglas, Utah, and report for temporary duty.

The leave of absence on surgeon's certificate of disability granted Major Washington Matthews, Surgeon, is extended four months, on surgeon's certificate of disability.

Leave of absence for three months, on surgeon's certificate of disability, is granted Capt. Wm. C. Shannon, Assistant Surgeon U. S. Army.

PROMOTIONS:

To be Assistant Surgeons, with the rank of Captain, after five years service, in conformity with Act of June 23, 1874.

First Lieutenant Charles Wilcox, Assistant Surgeon, Oct. 29, 1894.
First Lieutenant Harlan E. McVay, Assistant Surgeon, Oct. 29, 1894.

Official List of Changes in the Medical Corps U. S. Navy (Pacific Station) from December 20, 1894, to January 20, 1895.

Past Assistant Surgeon M. R. Pigott, U. S. Naval Hospital, Mare Island, California, preliminary to U. S. S, "Olympia."

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service (District of the Pacific) from December 20, 1894, to January 20, 1896.

Past Assistant Surgeon C. T. Peckham, to inspect unserviceable property at San Francisco Marine Hospital. December 26, 1894.

Past Assistant Surgeon J. O. Cobb, granted leave of absence for three days. December 28, 1894.

ITEMS.

Dr. Henry E. Sanderson has removed from 21 Powell street, San Francisco, to Stockton, California. Dr. Sanderson has been appointed an assistant physician at the State Asylum for the Insane, Stockton, California.

Dr. Lorenzo Boido has removed from Guaymas, Sonora, Mexico, to 2105 Webster street, San Francisco, California.

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